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The SCIENCE OF BUSINESS

BEING

**The Philosophy of Successful Human Activity
Functioning in
BUSINESS BUILDING
OR
CONSTRUCTIVE SALESMANSHIP**

By

ARTHUR FREDERICK SHELDON



LESSON SIX

**MAN BUILDING
ENDURANCE DEVELOPMENT**

CHICAGO, U. S. A.

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INTRODUCTION

ANOTHER brief review before beginning the study of a new branch of the Science.

1. We are still engaged in the study of organized facts pertaining to the party of the first part.

2. These facts, organized, constitute the Science of Man Building, which is the first of four branches of science to be studied in the Science of Business.

3. The object of the party of the first part in studying man building is to increase his efficiency value.

4. To do this he must reduce his need of supervision.

5. To do this he must reduce his destructive capacities, faculties, qualities, and powers.

6. To do this he must develop their opposites, or his constructive attributes.

7. To do this he must nourish and use them.

8. As he nourishes and uses the constructive attributes of his intellect, sensibilities, body, and will he develops his Ability, Reliability, Endurance, and Action.

9. As he does this he increases his AREA.

10. As he does this he increases his success.

11. To build reliability he must regulate and con-

trol natural appetites and passions, control and modify inherent temperament, develop intuition, and build the following complex feelings: (1) The spirit of Service, (2) responsibility, (3) faith, (4) courage, (5) temperance, (6) truth, (7) justice, and (8) love.

12. He thus conquers selfishness, indifference, doubt, fear, intemperance, falsehood, injustice, and hate.

13. As he does this he becomes reliable, and brings his life into harmony with the second tributary law of success: namely,

Other things being equal, the power of the individual to render permanently satisfactory Service varies directly with his reliability.

But man needs endurance as well as ability and reliability in order to render a maximum degree of satisfactory Service. And this brings us to a study of the health problem, to the end of developing the power of sustained effort.

There is no more important subject to be considered in the whole range of the Science of Business than that which will be studied in this lesson. It will not do any one any good, however, to simply come into an intellectual understanding of the laws of health which will here be made plain. But vast good will come to each and every one who applies the laws by making his own individual life a labo-

ratory for the demonstration of the truth of these laws.

If at any time the student needs help he should remember the services of the Special Correspondence Division, previously referred to. Use it freely.

Sincerely,

THE AUTHOR.

LESSON SIX

ENDURANCE DEVELOPMENT

CHAPTER I

WHAT IS ENDURANCE?

THE third tributary law of successful human conduct, related to the first primary law as stated at the beginning of Lesson Three, is as follows:

Other things being equal, the power of the individual to render permanently satisfactory Service varies directly with his powers of endurance.

The word "endurance" comes from the Latin *in*, "in," and *durare*, "to harden."

Business Science uses Endurance in the sense that the Oxford Dictionary defines it under its third definition: namely, "the power of lasting."

Whenever in the course of this Science we use the term endurance in its specific sense the student will understand that we mean "the power of lasting," or the power of sustained effort.

In a broad and general sense, endurance means "capacity of continued existence." It also means "the fact of enduring pain, hardship, annoyance; the quality of long suffering and patience."

The capacity to endure, both in its specific and general meanings, is a basic element in service-rendering power—the source of progressively profitable patronage. It is a natural effect flowing from health, in the true meaning of that term. For health, broadly considered, means more than being sound physically.

The word “health” comes from the Anglo-Saxon *haelu*, meaning “health, safety, salvation.”

It is a fact in Nature, and not a theory of fad-dists on health, that the safety of the individual, and his industrial salvation at least, cannot be secured in the absence of health.

Health is defined by Webster's Dictionary as “the state of being hale, sound, whole, in body, mind, or soul”; but especially as “the state of being free from physical disease or pain.” Broadly considered, therefore, “health” refers to the wholeness, the soundness, of each of the four grand divisions of man's being.

Constructive intellectual power, or Ability, comes from health of the intellect.

Constructive emotive power, or Reliability, comes from health of the sensibilities.

Constructive physical power, functioning in Endurance, comes from health of the physical body. It depends upon the wholeness, the soundness, of the body. And it is with this phase of health that this lesson has to do.

Ability and reliability are both essential for the

rendering of efficient Service, but both count for but little in the absence of a goodly store of physical man power, functioning in the capacity to endure.

An individual with good intellectual power and good emotive power, but lacking endurance, is like a giant with his hands tied.

Living according to Nature prolongs life. As we enter the door of the Science of Endurance Development we are again brought face to face with the reign of natural law.

The thirty-six out of each one hundred young men of twenty-five years of age who at sixty-five years of age are dead and buried, have paid the penalty of premature death through violation of natural laws of physical well being. This is true with but few exceptions, aside from the very few who are victims of unavoidable accident. And a large percentage of the fifty-six who are financially dead owe their failure largely to violations of natural laws of health.

Through force of racial habit, the threescore-year-and-ten idea has become more or less imbedded in racial consciousness. That is to say, it is a commonly accepted though utterly false belief that a man at seventy years of age is an old man and ready to pass on.

The facts are that natural living—living in harmony with natural laws—would normally result in

man living at least one hundred years, barring accident.

Scientists tell us that the normal span of life in the animal world is five times the length of the period which the animal requires to attain maturity. Thus, a horse attaining maturity at five years normally attains the age of twenty-five years, a cat or a dog attaining maturity at three years attains to fifteen, and so on through all the different classes of animals.

The human being attains physical maturity at about twenty years of age, and hence should enjoy a total life span of five times that period, or one hundred years; and a few favored individuals do, as a matter of fact, reach the century mark in more or less complete health of body and mind.

Seven results of poor health. Subtraction from the power to endure, not only in the matter of sustained effort in the work of the daily life but in the shortening of the normal length of life, is not the only evil consequence flowing from lack of soundness of physical condition.

Some of the destructive effects flowing from lack of physical health are as follows:

First. It unfits one for the society of home and social companionship.

Second. The lack of health makes the tired, crusty, crabbed, self-pitying crank or neurasthenic at the end of each day's work. He is generally

miserable himself, and succeeds in making miserable also wife, children, and every one else with whom he comes in contact.

Third. Poor health causes a lessening of the otherwise possible degree of ability. It is difficult to think clearly, remember readily, and imagine optimistically and constructively when the physical engine is not working right.

Fourth. It results in the weakening of reliability, as shown in Lesson Five.

- (a) The man whose physical forces are at low ebb has a difficult task in keeping his spirit of Service at the proper temperature.
- (b) As this cools, his resolution grows dim, his faith wanes, his courage and earnestness lessen, and his temperance in all things is interfered with.
- (c) With the weakening of moral courage come temptations to falsehood, the sense of justice is dulled, and the light of love grows faint.

Fifth. Many a first step toward crime is traceable to a negative physical condition.

Sixth. An unsound body means a weakening of the powers of decision and action—in other words, a weakened power of volition.

Seventh. Granting that the will remains strong, as is sometimes the case even in the presence of unsound physical conditions, the weakness of the

body renders sustained effort—"lasting power"—impossible.

In view of the above facts, it would indeed be difficult for the human mind to engage itself with the consideration of any subject of more fundamental importance than a study of the laws of physical well being.

The human body a wonderful machine. The most wonderful invention in the known physical universe is the physical body of the human being.

The term "invention" is used deliberately. Possibly no one knows the inventor—some will call it Nature; others will call it God—but no one who studies or even gives serious thought to the body can fail to marvel at the vast intelligence back of its creation.

Many of our modern inventions make man stand aghast and bow in reverence to the human intellects which thought them out—put various concepts, ideas, and sound judgments together in accordance with the laws and principles of the science of mechanics, and then through conscious decision and action, aided by the hand, made the imagined thing a reality.

Not one man-made invention, however, compares for one moment with the human body as a piece of mechanism. It is made of flesh and blood, bones and cartilage, tissue, veins and arteries, muscles, nerves, and organs, and all so delicately inter-

blended in arrangement and function as to put the most intricate mechanisms made of metals, minerals, and wood out of its class for all time.

Any one who will think about this subject seriously, study it even a little, and be reasonable, will agree with the above proposition.

The human body is at one and the same time the most wonderful and the least appreciated and the worst abused invention in all creation. Subjected to anything like the same abuse to which most physical bodies are subjected by their respective—but not respecting—owners, a Corliss engine, an automobile, a knitting machine, a typesetting machine, or any other purely material invention would not last long enough to make it commercially feasible to operate it.

When the time comes that the human race learns to appreciate as much and take as good care of its natural gifts as it does of its acquired and purely artificial possessions, it will be impossible to even estimate the constructive results. Poverty, disease, and crime are the three arch enemies of progress—the trinity of destructive effects hindering progress. If by any manner of means everybody in the world could awaken at the same time to a realization of the importance of the physical body, and an appreciation of the value to the individual which comes from taking good care of it, then in five years from that date poverty and crime would be radically

reduced, disease would be disappearing, and the span of human life would be decidedly increased. Within a very few years the normal span of one hundred years would be generally attained.

A sudden sweeping change, however, cannot be sanely even hoped for. The change must needs come about gradually, and many constructive forces are now at work to bring it about.

There is no reason, however, why any particular individual should postpone the happy day, as far as he is concerned personally, and in final analysis all reform rests with the individual.

As indicated in Lesson Three, it is probable that the basic reason why the importance and value of the physical body are not appreciated, and the body is so lamentably abused, is because it is a gift and is not looked upon as a possession.

The vast majority of mankind vaguely consider the physical body as the human being *in toto*. Each refers to his or her body as "my body," just as he would to his automobile as "my automobile," but he does this by force of habit; he does not really use the two terms in the same sense.

When he looks at his automobile he does n't think he is looking at himself, but when he looks in the looking-glass he thinks he is looking at a reflection of himself.

This is not the case. He is looking at an image of his body—a body that belongs to him just as the

automobile belongs to him; but he is n't looking at himself when he looks in the looking-glass any more than he is looking at himself when he looks at his automobile or any other physical thing.

The human body is simply a piece of mechanism made of flesh and blood, bones, and so on, instead of metal, wood, and other inorganic substances. But it is purely a physical thing and must remain so. It is the physical mechanism which the human being uses for doing just two things: (1) Receiving from the outside world, and (2) giving out or expressing that which is received.

Life resolves itself to the ebb and flow of the tide of impression and expression. Man receives impressions from the outside world through the intellect, and expresses himself through volition. In both these processes he uses the body as the physical medium.

As we have already learned in Lesson Four, the gray matter of the brain is necessary for receiving mental contents. Without it there could be no intellect, but it is simply the physical substance through which the mind is enabled to receive the incoming tide of impressions.

Without the body, the efferent side of man power could not be expressed at all.

All Nature is manifested as two things (1) matter, and (2) energy.

Without energy matter would be inert, a useless

mass. Energy, on the other hand, could not manifest itself without matter.

How man expresses himself. The human being is a knowing, feeling, deciding, and acting entity, expressing itself through (1) deeds, (2) words, (3) gestures, and (4) signs and symbols, and in so doing it utilizes its body.

Through the written words, signs, and symbols, man expresses thought, feeling, and volition in literature, mathematics, music.

By means of the spoken word and gesture, in oral communication, man expresses himself to his fellow man in the whole range of oral expression, from conversation to oratory.

Through the deeds he does, man expresses his knowing, feeling, and willing powers in invention, art, and industry, including all the so-called commonplace duties involved in human relationship.

If deeds done, and words, signs, and symbols used, are constructive in their nature, the results flowing from man's expression of self are constructive and result in successful human activity; if destructive, then the power to secure "progressively profitable patronage" is destroyed.

When one thus gets right down to Nature's basic facts concerning the physical body in which the living soul lives, moves, and has its being, a sense of appreciation of its value as a possession begins to dawn in consciousness.

The maximum of impressional or receiving capacity, and of expressional or giving capacity, cannot be obtained in the absence of health of the physical organism. Its state or condition must be that of being sound, whole, and hale, if it is to fulfill the function which Nature intended, namely, that of receiving and giving.

Care of the body essential. Common sense tells any one who thinks, that he should take better care of the physical organism than of any other physical possession.

He should take good care of everything he owns, but if his automobile or his house or his horse or his carriage, or any other physical possession is worn out or destroyed, it can be replaced.

The human body is the only physical possession which cannot be replaced. When it is seriously damaged it is both painful and expensive to the owner, and often impossible, to get it repaired. When it is badly used it wears out or rusts out long before it should, and in addition it is then impossible to obtain more than a small proportion of its maximum receiving and expressing capacity.

In the one fact of man's indifference to the correct use of his body lies the foundation, the starting-point, of millions of failures.

The author of this Science has never studied the sciences of surgery or medicine. His knowledge—

such as it is—of the physical organism has been obtained through (1) a study of physiology, (2) textbooks on physiological psychology, and (3) a painful and expensive personal experience.

He makes no claim to being an expert on the physiological side of man building. He has, however, made a study of endurance development from the viewpoint of philosophy—the science of effects by their causes—and has found the question of natural law as related to physical development a most vitally interesting one.

Born with a weak body and a natural inclination to neglect it, it has been and still is a struggle to force himself to obey laws now well known to him pertaining to the physical life.

However, necessity is the mother not alone of invention but of many constructive things. Through forced attention to and interest in the health problem he built a strong body out of a naturally weak one, and has now rebuilt a nervous system which became shattered in middle life.

But few know better than he, from a painful and bitterly expensive experience, the folly and danger of disobeying Nature's laws of health. And while not claiming to be a master in the art of applying known laws, he owes not alone his present powers of great endurance, but life itself, to having come into an understanding of the one and only principle

which underlies physical health, and the nine natural laws related to the one principle, all of which will be explained in this treatise.

It is with the keenest pleasure that he is able to pass on to his fellow man, through the instrumentality of Business Science, an understanding of this one principle and Nature's rules related to it.

Summary

First. The power of the individual to render permanently satisfactory Service varies directly with his powers of endurance.

Second. Endurance is the power of sustained effort, and is a natural effect flowing from health.

Third. Health as here considered refers to the soundness of the body.

Fourth. Lack of health and shortened life are due to ignorance of and violation of natural laws of physical well being.

Fifth. Lack of health unfits one for society and for work, it lessens ability, weakens reliability, detracts from the powers of decision and action, and renders impossible sustained effort under stress.

Sixth. The body is purely a physical thing—a mechanism which the human being uses for two purposes: (1) receiving from the outside world, through intellect, and (2) expressing that which has been received, through volition.

Seventh. The human being is a knowing, feeling,

deciding, and acting entity utilizing its body to express itself through deeds, words, gestures, signs, and symbols.

Eighth. If these are all constructive in their nature the results are constructive, and successful human activity will follow.

Ninth. The maximum of receiving capacity and of giving capacity cannot be obtained in the absence of health.

Tenth. The human body should have better care than any other physical possession.

Eleventh. The body is the only physical possession that cannot be replaced.

CHAPTER II

NOURISHMENT AND USE

AT THE door of the study of the Science of Endurance Development, from the viewpoint of natural law in the physical world, we are met by our now well-known friend, the principle of correct nourishment plus correct use.

This is the principle underlying the phenomena of physical health, and therefore the phenomena of the capacity to endure—the power of sustained effort—known as Endurance.

It is the primordial law of growth of every department of man's being, and the physical is no exception to the rule.

It is the principle from which all other laws of physical growth are derived, or to which they pertain, and may be accurately stated as follows:

The endurance of the individual varies directly with the correct nourishment and correct use of his body.

The basic nature of these two educative processes as the cause of "eduction" has been thoroughly explained already, and the mere statement of it as the principle at the basis of health is sufficient at this point.

Our work is to find the natural laws related to the principle—Nature's rules which, obeyed, enable the individual to correctly nourish and correctly use the greatest invention of all the ages—the priceless possession—the human body.

As the inquiring mind begins a search for Nature's laws of correct nourishment and correct use of the body, it is again brought face to face with the interdependence of the four departments of man's being, for he comes to see that the very first law related to the correct nourishment of the body is

The law of mentation. This law may be stated as follows:

Other things being equal, the endurance of the individual varies directly with the constructive nature of his mental processes.

This, of course, means the processes involved in (1) knowing, under which comes the exercise of the three basic faculties of thinking, remembering, and imagining; (2) the influence of the feelings; and (3) the influence of volition.

The combined use of the knowing, feeling, and volitional processes will be referred to in this Science as "mentation," meaning the action of the mental life. Hence the combined influence of the knowing, feeling, and willing processes upon the physical body is known as the "Law of Mentation."

The effect of constructive mentation is to generate chemical compounds of nutritious value which

stimulate the cells of the body to manufacture energy, excite the secretion of all digestive fluids, and thus nourish and build the body.

Negative or destructive mentation poisons the body.

This fact has been made plain in connection with our study of Lesson Five, and does not need extensive comment here.

We may state, however, that it has been demonstrated that such feelings as anger, hatred, jealousy, and revenge cause the generation of actual poison—a chemical substance as real as strychnine; not as potent, but just as real.

The effect of this poison is to contract the muscles, burn up and paralyze nervous tissue, deaden constructive powers, and dry up the nutritious secretions.

Naturally, the influence of all these tendencies is to poison the body and gradually to destroy it.

Physical diseases are gradually being traced to their definite psychological causes. Greed tends to ossification of tissue, causing a hardening of the veins and arteries, with corresponding high blood pressure. Fear tends to paralysis of the nervous organism, self-pity to actual destruction and wasting away of tissue.

"As a man thinketh in his heart, so is he," takes on a new significance in the light of these facts.

Value of good cheer. As a man thinks, remem-

bers, and imagines, feels, and wills, so is he in his body.

The owner of an automobile would be considered insane who would deliberately put sand in its bearings. But the same man might put the sand and mud of the influences of all kinds of negative thoughts, feelings, and volitions into the machinery of his body, and yet no one would think it particularly strange.

He who would endure must oil his physical machinery with the influences of good cheer.

Good cheer has a direct bearing upon longevity. Men and women of the largest lives are full of hope, aspiration, inspiration, pluck, courage, cheerfulness. And such people are strong when others are weak, hopeful when others are discouraged.

Gladstone attributed his longevity and good physical health among other things to the fact that his wife would never allow him to fret or worry. At last he learned the glorious philosophy of not worrying.

Dr. James Freeman Clark accomplished all he did because he always maintained a cheerful disposition.

Jay Cook was a millionaire at fifty-one. At fifty-two he was a pauper. At fifty-six he paid every dollar of his gigantic indebtedness. What was there in the man that enabled him to do it?

"One great thing," he himself explained, "was

that I inherited from my parents a buoyant disposition."

Of course he had to have other qualifications, but he could never have gone through what he did with the blues to deaden his efforts.

It is asserted that Lord Lanesburgh cured the gout by cultivating abounding cheerfulness.

"A merry heart hath a continual feast," and "a cheerful heart doeth good like a medicine," are scientific statements of truth.

How to apply the law of mentation. The way to put the law of constructive mentation into operation is to

First. Study and apply the facts made plain in Lesson Four.

Second. Study and apply the facts made plain in Lesson Five.

Third. Study and apply the facts concerning physical health made plain in the remaining chapters of this lesson.

Fourth. Study and apply the facts pertaining to volition which will be made plain in Lesson Seven.

The individual who will follow the counsel just given will be in harmony with the law of constructive mentation, and will have traveled far on the road toward the building of a sound, hale, whole physical body.

But the law of correct mentation is not enough.

That is but one of nine natural laws for the development of Endurance.

Nature's rule No. 2 will be considered in our next chapter.

Summary

First. The principle from which all other laws of physical growth are derived is: The Endurance of the individual varies directly with the correct nourishment and correct use of his body.

Second. The first related law is: The endurance of the individual varies directly with the constructive value of his mental processes.

Third. The effect of constructive mentation is to generate chemical compounds of nutritious value, stimulating the cells and exciting secretion of digestive fluids, and thus nourishing and building the body.

Fourth. Negative or destructive mentation poisons and gradually destroys the body.

Fifth. Many physical ailments have been traced to their psychological causes.

Sixth. As a man thinks, remembers, and imagines, feels and wills, so is he in his body.

Seventh. Good cheer has a direct bearing on longevity.

Eighth. The longest and largest lives are full of hope, aspiration, inspiration, pluck, courage, and cheer.

CHAPTER III

THE LAW OF BREATHING

BREATHING is such a natural function, its operation so commonplace, and air so free, that no one ever appreciates the importance of correct habits of breathing and their relation to health and endurance until he gives the matter serious consideration.

Other things being equal, the endurance of the individual varies directly with the development of correct habits of breathing.

Serious thought directed to this subject reveals among other things the following self-evident facts;

First. The human body can continue to live for days without food, water, or rest, including sleep. In fact, the other eight laws related to endurance may all be violated for a time without immediate destruction of the body.

Second. The body cannot live five minutes without breathing.

Third. The lungs in performing their function of breathing supply the body with the active principle of oxygen, without which life is impossible.

Oxygen is one of the most important physical elements entering into the constituency of man.

The earth is said to be nine tenths oxygen; the ocean nearly eighty-nine per cent. In the human being weighing one hundred and fifty pounds, one hundred and ten pounds are oxygen.

Set free, the one hundred and ten pounds of oxygen contained in a human being fill seven hundred and fifty cubic feet of space.

In the light of the foregoing facts in Nature, it is not strange that the better one breathes the more vital force there is in the body.

Pure air contains a pranic or magnetic principle which the human organism extracts in the process of breathing. This adds to the magnetism of the body.

Correct breathing carries off many of the impurities of the body.

What constitutes correct breathing? Correct breathing depends upon three things: (1) The kind of air breathed; (2) the proportion of lung cells brought into play; and (3) the manner in which the air is received into the lungs.

Here we are brought face to face again with our now familiar friends, Quality, Quantity, and Mode.

Right quality of air, plus right quantity of it, plus right manner or mode of breathing it, equals efficient breathing.

Nearly all adults have formed bad habits of breathing. The negative results of these bad habits are so serious that there are high authorities among

hygienic scientists who claim that were it not for bad breathing habits, disease would soon be so rare as to be a curiosity.

The reasonableness of this claim is perceived in the light of the following facts:

First. Consumption is said by some authorities to be responsible for one death out of every seven.

Second. Pneumonia is almost as deadly.

Third. A whole train of throat, nose, and lung diseases claims many victims.

Fourth. All are very largely, and often entirely, the result of bad habits of breathing.

Fifth. Every disease breaks through Nature's guard only when vital resistance is lowered.

Sixth. Bad habits of breathing are largely responsible for lowered vitality.

Bad Breathing Habits

Breathing bad air. Bad air is of two kinds.

1. That which is poor in the life-giving principle of oxygen.
2. That which has been polluted or vitiated by some impurities.

Air that has been breathed is always polluted. Any one can prove this by a simple experiment, as follows: Breathe gently into a jar or bottle until you fill it with your breath. Cork the jar and let it stand a while. Then uncork and notice the offensive odor.

To rebreathe one's own or other people's exhalation

tions is a most unhealthful habit. No one can breathe bad air and at the same time think clearly or cultivate a high degree of physical endurance. It is a law of life that:

*Other things being equal, the purer the air
breathed, the greater will be the endurance
of the one who breathes it.*

Millions of people are unconsciously committing suicide by the process of slow poison due to the careless or false habit of breathing bad air.

The way to break this bad habit is as follows:

1. Get rid of the superstition that drafts are dangerous.
2. Frequently open the doors and windows of your living room, your office, the factory, the church, the theater, and the clubroom.

Medical men tell us that the reason coughs, colds, la grippe, and pneumonia break out on the approach of cold weather is because people then shut themselves up in badly ventilated rooms. The natural result is lack of oxygen, the vital resistance of the body is lowered, and hence disease finds easy victims.

When cold weather comes, one should build bigger fires and put on more clothing if necessary, but above all things he should insist upon getting plenty of pure air.

3. The third rule for breaking the habit of breathing bad air is to live out of doors as much as possible.

Any individual in any walk of life who will do the three simple things just enumerated will fulfill the first requisites for correct breathing. And these things must be done if the natural law of correct breathing is to be obeyed. But it will do no good to know the conditions unless the knowledge is put into practice.

The average individual knows the statements just made are statements of fact as soon as he really thinks about them. The most of us, however, need to be reminded.

The trouble is, the vast majority of mankind do not stop to think about such important although seemingly commonplace facts until they are brought to their attention through necessity or otherwise.

Breathing backward. If the exact facts could be known, it is probably true that nine out of every ten adult persons breathe backward. This is true even of many who think they are taking proper breathing exercises.

Many persons, when practicing special breathing exercises, bend backward, lift the shoulders, puff out the chest, and draw in the abdomen as they lustily and noisily inhale.

When this is done, the following results ensue:

- (1) The small upper lobes of the lungs are filled;
- (2) the big lower lobes are cramped by reason of the fact that the diaphragm is drawn up.

All these tendencies are negative and destructive.

The little child breathes forward instead of backward. In other words, he breathes as Nature intended the human being to breathe. Make it a point to watch the process. The following facts will be noted:

1. When he "drinks in the air," he lets it go down just as the water goes down that one drinks. It goes down to the capacious big lobes at the bottom of the lungs, away down to the diaphragm.
2. The abdomen, the sides of the trunk, and even the back will be forced out to make room for the abdominal organs as the diaphragm pushes them down to provide room for the air in the big lobes of the lungs. When this is done, the chest expands and the upper lobes are filled.

Every student of the Science of Business should demonstrate the above facts at this very point in the lesson. In making the demonstration, make this not two movements, but one smooth, rhythmic movement. This will give a full, life-giving breath.

Then, just as smoothly and rhythmically, still standing or sitting erect, lower the chest walls—not caving them in—and then relax the diaphragm, permitting the walls of the lower trunk to contract, forcing the abdominal contents up and the air out of the lower lobes of the lungs.

This is the prime basic breathing exercise. One can take it at his window when he first rises in the morning, while standing on the street corner waiting for his car, while riding on the car platform, and occasionally during the day while seated at his desk or doing his duty, whatever that may be.

Every time this exercise is practiced, the one demonstrating it will not only feel an increase in energy and cheerfulness, a letting down of nervous strain and a release from fatigue, but he will be forming the habit of breathing correctly.

Within a reasonable time, any one who persists in following the directions just given will succeed in breaking the bad habit of breathing backward.

Not breathing enough. Many breathe with only the upper lobes of the lungs. This violates both of the elements entering into the principle of growth.

In all such cases, the lower lobes of the lungs are neither being properly nourished nor properly used.

The inevitable result is atrophy and decay, for the simple reason that anything which is not nourished and not used must disintegrate. This is a law of life, and no one is shrewd enough to get around it.

This bad habit is the result of:

1. Tight clothing, which binds up the lower lobes of the lungs, hindering expansion.
2. Laziness, thoughtlessness, and inattention to a vitally important subject.
3. Gormandizing.

Tight corsets and correct breathing at one and the same time are a physical impossibility. Verily, vanity and pride come before the physical fall of many.

Overeating and correct breathing are likewise incompatible. The overloaded, stuffed stomach hinders the action of the diaphragm and interferes with breathing. The glutton violates the laws of right eating and the laws of correct breathing at one and the same time.

Alexander Haig says the most powerful man would be of little use in a fight if he had eaten so much that there was no room for his heart and diaphragm to work.

The foregoing facts are made plain in the light of these further facts:

First. The upper lobes of the lungs are comparatively small.

Second. They are filled with and emptied of air by lifting and lowering the walls of the chest.

Third. The lower lobes of the lungs are much larger than the upper and are filled with and emptied of air by the action of the chest plus that of the diaphragm—the large, dome-shaped muscle that separates the contents of the thorax from those of the abdomen.

Fourth. When this dome flattens out, its diameter grows larger and it presses down all the organs of the abdomen.

Fifth. This, in turn, forces out the walls of all that portion of the trunk below the ribs.

Sixth. It will be readily seen that this action gives room for very much greater intake of air than the mere expansion of the chest.

Seventh. Also, that greater than either alone is the combined action of the chest and diaphragm, and that therefore the only correct way to breathe is by the use of both.

Eighth. This, the correct "mode," is an impossibility on the part of those who indulge in the bad habits already referred to.

The following conditions are necessary for correct breathing:

First. The lungs must not be cramped by stooping over so that the chest caves in.

Second. The backbone must be kept straight so that the abdominal organs are not forced up into the cavity that belongs to the lungs.

These two conditions are necessary because when the backbone doubles over, a part of the weight of the body actually rests on the liver, stomach, and other digestive organs, pushing them out of their natural positions, lowering their vital tone, and hindering their proper functioning.

Many a stubborn case of functional disease, and even cases of organic disease, can be traced to this lazy or inattentive bad habit of bending the spine down upon the vital organs.

The business man at his desk, the bookkeeper at his books, the stenographer at his typewriter, the workman at the bench, the salesman at the counter or sample table, the housewife at the sink or dusting and sweeping, all must break the erectness of the body at some point.

Nature did n't intend that the breaking point should be in the spine; she gave each human being a hinge to be used for that purpose. The hinge is at the hips.

It is both more comfortable and more graceful to break at the hips than to loop the backbone.

Each student can prove this, and he must make his life a laboratory for demonstrating this fact if he wishes to cultivate his highest possible degree of endurance.

A word of caution. In making the experiment one must not go to the extreme and try to stand up so straight that he bends backward. Many do this. The idea is not to throw the shoulders back and puff out the chest and abdomen, but to stand erect.

The one who attains the posture of power forgets the shoulders. His act is that of trying to get the crown of his head as high as possible.

One authority gives this vivid suggestion: "Stand erect. Have a mental picture of a rabbit at alert attention, and then hold your ears like a rabbit."

The posture of the body is very important in many ways.

First. It tones up all the vital organs and aids correct breathing.

Second. It aids, and in a sense may be said to actually create, feelings of a constructive nature.

When one is full of courage, energy, and eagerness to do things, he naturally straightens up, lifts the head, and breathes deeply.

Conversely, when one stands erect, holds his ears like a rabbit, and breathes away down deep to the bottom of his lungs, he excites within his mind feelings of courage, energy, and optimism.

Third. The erect, easy posture suggestive of self-reliance and power is a mighty aid in getting favorable attention and inspiring confidence, and thus a potent factor as a starting-point in arousing interest, creating appreciation and desire, and impelling decision and action. Thus it is a big asset to the business builder in taking the first step in securing business.

Our sturdy forefathers sat on three-legged stools and benches without backs. They used their own backs, and were not dependent upon upholstery. They became men and women of backbone in more senses than one.

Elevation of the vital organs gives us what is called "the active chest." It is raised and fixed, as if ready at any moment to receive a blow.

Breathing deeply, in the manner counseled in this lesson, calls into requisition all the 725,000,000

air cells and the 1,400 square feet of air surface in the lungs. The blood is oxygenated and purified, and pure blood in turn invigorates every part of the body and every function of every organ.

Breathing through the mouth. This is a most destructive habit. The way to cure it is to keep one's mouth shut and force oneself to breathe through the organ which Nature intended for that purpose—the nose.

The nostrils were provided by Nature for breathing purposes. They are equipped to sift, moisten, and warm the air before it is taken into the throat and lungs.

The bad habit of mouth breathing results in taking irritating dust and deadly disease germs into the delicate organs of the mouth and throat, besides weakening their resisting power by contact with air that is too dry or too cold.

The nostrils form a curious protective apparatus which comprises (1) a filter and (2) a heater.

When the breath is taken through the mouth there is nothing either to strain it or to warm it. There is nothing to sift out the dust and other foreign substances such as germs, bacilli and microbes, which find lodgment in the throat and lungs and work much mischief.

Cases of consumption are often started in this way.

The bristling hairs of the nostrils catch and hold

most impurities, and the long, winding channel called the **post nares**, lined with warm mucous membrane, tempers the air so that no harm is done to the delicate lining of the throat and lungs.

Nature's refining process continues in the nostril, impurities being caught and expelled, and if necessary violently ejected by a sneeze.

Mouth breathing is the direct cause of thousands of cases of weak throats, sore throats, colds, pneumonia, consumption, and innumerable deaths. It has even been asserted that mouth breathing and insufficient abdominal breathing cause more sickness of the kind just described than all other causes combined.

From the standpoint of preservation of life, breathing is the most important function of the body. The nose is the one organ which Nature intended to be used for this purpose. It cannot be closed; the mouth can. Any one who attempts, either consciously or unconsciously, to use the mouth to perform the function that Nature intended the nose to perform, is violating a natural law and must pay the penalty; there is no escape from it.

Breathing Exercises

Under this head we shall avoid all fancy exercises and give only what is really necessary for practice in order to keep a busy man in health.

The walking exercise. Exhale as you walk; then

inhale while you take ten steps; hold the breath with the lungs packed full for two or three or four steps; exhale in the next ten steps. After this take two or three full breaths without counting. You will feel hungry for them.

Sitting exercise. Exhale as you sit. Take a full, long, deep breath, expanding abdomen, sides and chest. Now hold the chest up, keeping it distended, let the breath out gradually by drawing the abdomen in and up; then inhale again until the abdomen is distended and continue breathing in this way, holding the chest up all the time so that there is very little motion in it or none at all. This is a fine exercise for the diaphragm and the abdominal muscles. It is asserted that cases of constipation, chronic cases of twenty years' standing, have been cured by this deep abdominal breathing. It kneads the abdominal organs, increases the circulation, flushes the ducts, stimulates functioning.

The window exercise. This is the same as the walking exercise, only performed at an open window. When in office, store, or factory try to get to an open window at least twice a day and practice there, changing "steps" into "counts."

A Final Word

Our closing counsel in regard to the law of correct breathing is as follows:

Place a high value upon fresh air. It is now the

recognized remedy for the treatment of all kinds of lung troubles. People by the thousands are living and sleeping in tents, not always to effect some cure, but to maintain good, abounding health.

This emphasizes the importance of sleeping with plenty of fresh air in the room. One should have sufficient covering in cold weather, but under no circumstances should he sleep with all the windows shut.

To sleep with the windows closed forces one to rebreathe air already inhaled, and this means poison to the blood, which in turn carries the poison to all parts of the body. Any one who does this is violating natural law, and must pay the penalty. No one will do it who realizes that it is a fact, and not a theory, that:

The endurance of the individual varies directly with the degree of development of his habits of correct breathing.

The object of Business Science is to make plain Nature's law of physical endurance and to teach enough concerning each to enable him who does two things to effect radical physical improvement.

These two things are (1) to understand the laws related to the principle of growth (nourishment plus use); and (2) to really apply what has been learned.

Volumes have been written on the subject of correct breathing. Some oriental philosophers

base whole systems of physical and spiritual development upon the science of breathing.

No such extremes will be taught in this course of study. Any one who really tries to do so can put into practice the facts stated in this chapter. There are no fads or fancies about these facts, but the value to the individual lies wholly in their application.

Apply them, and endurance will increase as certainly as steam will increase when fuel is added to the fire beneath the water-filled boiler of an engine.

This is true, because it is a law of Nature that:

Other things being equal, the endurance of the individual varies directly with the development of his habits of correct breathing.

No one can disregard that law without paying the penalty in subtraction from the otherwise possible total of his power to endure.

Summary

First. The endurance of the individual varies directly with the development of correct habits of breathing.

Second. Pure air properly inhaled is essential to health.

Third. Correct breathing depends upon: (1) Right quality of air; (2) right quantity of air; and (3) right mode or manner of inhaling and exhaling.

Third. Bad habits of breathing are responsible for many diseases through lowered vitality.

Fourth. Bad air is that which is deficient in oxygen, or that which has been vitiated by impurities.

Fifth. Refuse to breathe bad air by (1) getting rid of the fear of drafts; (2) frequently opening the doors and windows; and (3) living out of doors as much as possible.

Sixth. Learn to breathe deeply and rhythmically.

Seventh. Learn to sit and to stand erect, that you may be able to breathe enough.

Eighth. Breathing through the mouth is a destructive habit and a principal cause of disease.

Ninth. The nostrils form a protective apparatus which filters and warms the air.

Tenth. Nature intended man to breathe through his nose.

Eleventh. The walking exercise and the window exercise will teach rhythmic breathing.

Twelfth. The sitting exercise will aid in deep breathing.

Thirteenth. Place a high value on fresh air and its correct inbreathing.

CHAPTER IV

THE LAW OF CORRECT DRINKING

WHILE it is impossible to give to the laws of health related to the principle of nourishment plus use exact and fixed places as to order of importance, it is quite probable that if the truth were known, right drinking is third in order of importance.

Other things being equal, the endurance of the individual varies directly with the degree of development of his habits of right drinking.

The physical body can exist for days or even weeks without food, but the water supply must be renewed every few hours, else disastrous consequences follow.

If the absence of water is forced for a very few days, the body dies.

Next to air, water is the most plentiful and the freest gift among man's necessities for existence. In all probability herein lies the reason for his non-appreciation of its fundamental importance. Its importance as a life-giving and endurance-begetting element is found in the fact that about eighty per cent of the human body is composed of water.

One of the two elements entering into water is oxygen, the vital nature of which in its relationship to the physical organism has already been explained.

When it is denied, or poorly supplied with the element of which eighty per cent of its substance is composed, it is not difficult to anticipate the destructive consequences which are bound to follow.

There are but five phases of this subject to which we need give attention. They are as follows:

1. What to drink.
2. When to drink.
3. How much to drink.
4. How to drink.
5. What not to drink.

These, in turn, all resolve themselves into the three universal abstract elements: right quality, right quantity, and right mode.

What to drink. The answer to this question is pure water. Pure water is Nature's beverage. It is one of the best builders of the body, and seemingly marvelous cures have been effected by the liberal drinking of good water.

The purest water is distilled water. Distilled water is the best natural solvent. It helps to wash liquid and solid impurity out of the body, besides providing the little sea of warm water in which nearly every cell of the body must float in order to function properly.

All of the eliminative organs of the body—those that clear off the waste and poisons—depend for the performance of their work upon plenty of good water.

If enough water is not supplied, these organs work poorly, waste products and poisons gather and putrify, the blood is vitiated, the breath becomes foul, and all kinds of disease germs find a fertile soil.

The human engine needs plenty of good pure water. If denied it, the boilers will suffer.

The Ralston Health Club makes a great point of the value of distilled water. It is claimed that the drinking of distilled water retards the ossification or hardening of the bones, and greatly prolongs life. This is an entirely reasonable hypothesis.

When to drink. First. There are many able authorities who assert that one should not drink anything with the meals.

If one eats correctly, according to advice which will be given in Chapter VI, thoroughly chewing the food and thus exciting a plenteous flow of saliva, it is much easier to go through the meal comfortably and with enjoyment, without washing the food down, than it is when one is only half chewing his food.

On the other hand, there is probably but little if any destructive tendency resulting from sipping small quantities of water during meals, if it seems

called for and is not used for the purpose of washing down unmasticated food.

Second. Drink plenty of water early in the morning while taking breathing and other exercises. If not convenient at that time, take it when the bath is taken. This is a rule which should always be followed and no exceptions permitted.

Third. Make it a habit to drink plenty of good water during the day.

Fourth. Always drink when thirsty, but don't wait until Nature cries out for water. Bad habits of eating and lack of proper exercise often pervert Nature.

Fifth. Cultivate the habit of wanting to drink water frequently. A good way to do this is to provide oneself with a receptacle for water, and always to have it close at hand.

In all, there are millions of people who are slowly dying for the simple reason that they are not drinking enough water, although they might just as well drink it as not, and would if they knew its importance as a factor in health and endurance development.

How much to drink. The amount of water needed depends somewhat upon the activity of the body, the temperature, and the humidity of the atmosphere. Every one, however, needs at least two quarts of water a day.

One who sits all day in an office, in a moist, tem-

perate climate, of course needs less than a man who works all day in the hot sunshine of the Arizona or southern California desert, or any other locality where the atmosphere is dry. The latter can drink from two to three gallons of water a day and be the better for it.

One authority has said: "Drink water and plenty of it; get the best water you can—distilled or boiled if accessible—but drink it anyway, good, bad, or indifferent. You run greater chances of becoming sick through neglecting to drink the proper quantity of water than from drinking bad water."

How to drink. Drink slowly. The reasons for this rule are as follows:

Rapid drinking chills the stomach when the water is cold. When drunk slowly, the water is warmed on the way to the stomach.

Many deaths and prostrations that occur during hot weather are said to be the result of gulping down quantities of ice water.

Slow drinking increases the secretions; it excites the flow of more saliva, and thus helps mastication. This augments the digestive juices of the stomach.

Right mode of conduct or manner of drinking may therefore be summed up in the one rule: Drink slowly.

What not to drink. Rule No. 1. Do not permit a drop of alcohol to enter the system. Alcohol is a poison.

Physiologists and physiological psychologists have proved by many experiments that alcohol is not even a true stimulant. Science has proved that alcohol only **seems** to stimulate, while as a matter of fact it lowers the endurance, activity, and accuracy of every one of the constructive capacities, faculties, qualities, and powers.

The moderate drinker imagines that his ten o'clock in the morning "bracer" makes him think more clearly and accurately and work faster, and that his "night-cap" enables him to sleep better. The scientist comes along, however, with his instruments of precision, and invariably finds that the man is self-deluded, or rather drug-deluded, for the very opposite is the case.

There are thousands of men who fool themselves into thinking that they must take a stimulant in order to endure the day's work. They are either ignorant of or else carelessly ignore the law that action is always equal to reaction. Since alcohol does not strengthen, but simply falsely stimulates, one can readily see that under such conditions the reaction is far greater than the seeming constructive, beneficial action.

Drinking whisky or any other kinds of alcoholic stimulant in moderation may **seem** to increase mental activity and clearness of perception, but careful investigation shows that in reality it hinders and confuses the mind.

The effect of alcohol is not the same on any two individuals. It may produce depression and grief in some, while in others it produces exhilaration and exaggeration; it causes one to imagine himself wealthy, while another under its influence believes himself impoverished. All of which goes to show the bad effects of the stimulant. It gradually dethrones judgment and reason, and leaves its victim totally unfit for business.

The ultimate effect of its use is the reduction of efficiency to the minimum.

Dr. Lorenz, the noted Austrian surgeon, attended a banquet given in his honor in New York. When the liquors were placed upon the table it was noted that he left his wine untasted. Some one asked him if he was a teetotaler.

"I cannot say that I am a temperance agitator," he answered, "but I am a surgeon. My success depends upon my brain being clear, my muscles firm, and my nerves steady. No one can take alcoholic liquor without blunting these physical powers, which I must keep on edge. As a surgeon, I must not drink."

Alcohol acts as a poison on the nervous system and causes the drinker to suffer by reason of the fact that the interference with nervous action has its effect in time upon nutrition. This results in improper digestion and assimilation, and the fuel for the human engine is rendered poor in quality.

From this cause, as well as a peculiar local action of the various poisons, come many organic degenerations which materially shorten life.

The immediate effects of the use of alcoholic stimulants are bad; the cumulative effects are absolutely destructive. The victim of alcohol senses more and more falsely, images less and less clearly, and forms concepts more and more vaguely and meagerly. Gradually his power to perceive correct judgments, laws, and principles is destroyed, he remembers less and less readily, imagines more and more wildly, destructive feelings are augmented, physical endurance destroyed, and the power of volition disintegrated.

In this strenuous age, when the law of the survival of the fittest is working all the time, no business builder can afford to handicap himself by the use of alcohol. No one who is impelled by the spirit of service, and who seriously wishes to exercise the art of securing progressively profitable patronage will use it.

Rule No. 2. Be moderate in the use of all beverages except water.

The excessive use of tea and coffee is undoubtedly injurious to many people.

A safe guide is for one to be absolutely honest with himself. If troubled with indigestion, sick headache, insomnia, burning of the eyeballs, nervousness, or other symptoms, it is a wise plan to

stop the use of tea and coffee, and see whether these ailments will not disappear.

If they do, then common sense would indicate that they are good things for that particular individual to let alone.

Too much tea has been shown to act as an unnatural stimulant which, after the immediate effect wears off, results in decided reaction. The same is true of coffee.

The Science of Business, however, does not demand, neither does it counsel asceticism. It does not demand self-denial to the extent of making oneself eternally miserable.

Nature herself demands of him who would render permanently satisfactory Service a wise discrimination between those things which seem to bring pleasure and gratification and the things which bring permanent happiness.

The individual made miserable by gratification of false appetites for destructive drinks of any kind may be rendered somewhat unhappy for a little while when he gives them up, but his fund of permanent happiness will be immensely added to every time he gives up anything which is really destructive.

Summary

First. The endurance of the individual varies directly with the degree of development of his habits of right drinking.

Second. The first essential for life and health is pure air; the second appears to be pure water.

Third. Man must drink to live, and the best beverage is pure water.

Fourth. Drink plenty of water early in the morning. Drink sparingly, if at all, while eating.

Fifth. The amount of water to be taken daily depends upon the temperature, the humidity of the atmosphere, and the activity of the body.

Sixth. Drink slowly.

Seventh. Drink no alcoholic liquors. Alcohol lowers endurance as well as the accuracy of all the constructive capacities, qualities, and powers.

Eighth. Be moderate in the use of tea and coffee.

Ninth. Nature demands of him who would render permanently satisfactory Service a wise choice between those habits which give temporary gratification to the senses and those which produce permanent happiness.

CHAPTER V

THE LAW OF RIGHT EATING

HABITS of eating, like all other habits, are either constructive or destructive. Constructive habits build the body and beget endurance; destructive habits disintegrate it and destroy endurance.

Other things being equal, the endurance of the individual varies directly with his habits of correct eating.

An analysis of the process of eating reveals the three universal elements again: Quality, Quantity, and Mode.

If the quality and quantity of food eaten by any individual are right and his manner, or mode, of eating it is right, his habits of eating are then right and he is building his body and generating the power of sustained effort.

If he is not eating the right quality of food, or the right quantity, or if his mode or manner of eating is wrong, then his habits of eating are destructive and his power of endurance is lessened. The vast majority of mankind violate each of the three laws entering into the one principle of correct eating.

It is probable that more attention has been given to this subject by hygienists, physical culturists, and health experts than to all the rest of the problems of the care of the body put together. Years of time and exhaustive study, and thousands of dollars have been spent in attempting to learn just what it is best to eat. Many volumes have been written on the subject, and great institutions have been built for the purpose of telling people what to eat.

The result has been a great confusion in the teachings of those who claim to be authorities; many people have lost faith in all dietary systems on this account, and much harm by extreme fads has ensued.

It is not the purpose of the Science of Business to enter extensively into the question of dietetics. It is its purpose, however, to point out certain basic laws which are universally recognized by all thinking people as soon as thought is given to them, but which many intelligent persons have not thought much about.

Quality of food. The first universal rule as to quality of food is that the food must be pure and contain elements of real nourishment.

If the food will nourish the body, the quality is right for that particular body; if it will not nourish that particular body, the quality is wrong, no matter what the food may be.

This fact is illustrated in facts made plain by the science of agriculture. Two fields lie side by side on the same farm. One may be lacking in certain chemical elements, such as lime, necessary to make the field fertile, but rich in other elements, such as phosphates. The other field may be rich in lime, but poor in phosphates. In such a case, soil food suitable for one field would not nourish the other.

It is just so with the human body. One body needs food containing certain elements to properly nourish it and thus supply missing elements. Another needs quite a different kind of food.

This is, therefore, a question which the Science of Business must needs remain silent upon so far as individual and specific advice is concerned.

It has been well said that what is one man's meat is another man's poison. A competent physician, as a result of a thorough personal examination, should be able to determine what particular foods are needed in any individual case, some physical bodies being rich in one or more elements but lacking in others.

There is, however, the necessity of observing the invariable rule of demanding the element of purity in food. No food can truly nourish unless it conforms to the law of purity. No one can violate the rule that he must eat pure food, without paying the penalty.

Nature, in the manifestation of what is known to

science as "natural hunger," is a good guide as to the kind of food needed.

If it were not for the fact that "natural hunger" has been unseated from its throne by the cultivation of false appetites, it would be an infallible guide, and the services of a physician, even at the beginning of the formation of habits of correct eating, would not be at all necessary.

They are not necessary, in fact, with any individual who is fairly normal as to soundness of physical condition, if he will but so regulate his life that natural hunger has a chance to manifest itself.

The lower animals eat what their nature (natural hunger) tells them they need. Cats will not eat catnip all the time, but when their bodies need the natural elements entering into catnip they crave it, seek it, find it if possible, and eat it.

The wounded bear seeks certain herbs and clays to heal its wounds.

In the days when the buffalo roamed the western plains, great herds used to travel many miles to reach the saltlicks, because the physical organism craved salt at stated periods.

The feeling of natural hunger will tell the individual what particular foods his body needs to build itself with, provided natural hunger is not interfered with and crowded out by false appetites. The latter, however, is unfortunately the case with millions of individuals, and right here is the secret of the

violation, by the vast majority, of the laws of right eating.

Man, more than any other being, is a creature of habit. His physical organism has been literally builded by the law of habit, and through habits it is either nourished and used to the end of growth and further development, or it is disintegrated and destroyed.

Among the most destructive habits is that of false appetites. Natural hunger is as far removed from appetite as light is from darkness or love from hate. With the strong arm of false appetites, millions of people are digging their graves with their teeth.

The following are basic facts of Nature pertaining to right eating:

1. Appetites are indicated by gnawing or "all gone," faint feelings in the stomach.
2. Natural hunger is felt in the mouth, being a function of the palate.

When appetite rules instead of hunger, the following results ensue:

1. Food is often swallowed whole or nearly so.
2. It is generally washed down with tea or coffee or water.
3. Jaded and false appetites are stimulated with condiments, alcohol, and fancy dishes.
4. Unwholesome foods are eaten.
5. Too much food is eaten.
6. Too rich food is eaten.

7. As an ultimate result of all this, natural hunger (Nature's guide as to what, when, and how to eat) becomes depraved and perverted until nothing is left but unhealthy and unnatural appetite.

Few people in the midst of twentieth-century so-called civilization are blessed with natural hunger.

Lack of regulation and control of the instinct of self-preservation, as explained in Lesson Five, has gone far toward accomplishing its destructive tendency in the matter of right eating.

The modern banquet table is a travesty upon intelligence, and eloquent proof of the fact that human intelligence has not as yet been seriously directed by the masses to the subject of right eating, despite all the efforts in that direction by its enthusiastic specialists. It is conclusive proof of the rule of appetite **versus** natural hunger.

Few if any more important subjects can claim the attention of thinking people than the question of what, how much, and how to eat.

Our bodies are built by the air we breathe, the liquids we drink, and **the food we eat**.

Blood is the "river of life," and it is made from the food we eat. Poison placed at the source of the river contaminates the whole river. Wrong Quality, Quantity, and Mode of eating, therefore, poison the whole river of life.

Wrong habits of eating not only poison the blood, which in turn poisons all parts of the body, including the gray matter of the brain and thus seriously retarding mental processes, but a large part of the vital energy of those who violate Nature's laws of correct eating is wasted in unloading from the system either a surplus of right food and drink, wrong food and drink, or food and drink wrongly eaten and drunk. It often happens that the system is handicapped by all three of these evils.

How necessary, then, that the material selected be the very best and suited to the individual need, that it be taken in the right quantity, and that the mode of taking it be correct.

The confusion resulting from the claims of various specialists and faddists has resulted in the cry going up: "Is there, then, no true science of dietetics?"

It would seem to the scientific mind that the question has at last been answered by Mr. Horace Fletcher.

Horace Fletcher on how to eat. It can probably be safely stated within the bounds of conservatism that Mr. Fletcher stands at the very top in this particular field of science.

Like all great things, his rules are simple and few in final analysis. They are as follows:

First. Wait for true, earned hunger before eating.

Second. Select from the food available that which appeals most to the natural desire, and in the order called for by the natural desire.

Third. Get all the good taste there is in the food and hold it in the mouth until it is involuntarily swallowed.

Fourth. Enjoy the taste to the full, and don't let any depressing or diverting feeling interfere.

Fifth. Eat slowly, take plenty of time for the eating of any given meal, and enjoy it as much as possible.

Mr. Fletcher tells us that if these five simple rules are followed, Nature will do the rest.

Commenting on these rules, Mr. Fletcher tells us that a true natural hunger will demand only that which is best for the body which is hungry, and will also give notice when enough has been supplied.

Thus Nature, if not interfered with, settles the vexed questions of what to eat, how much to eat, and how to eat it.

We quote from Dr. Van Someren of Venice as follows:

"In November, 1900, Mr. Horace Fletcher called my attention to the discovery in himself of the closing of the throat against food, with the consequent inability to swallow, *unless the food had been completely masticated.*"

Dr. Van Someren experimented and found that in his own case, by following the rules laid down

by Mr. Fletcher, the "fauces"—the narrow passage from the mouth to the larynx, situated between the soft palate and the base of the tongue—refused to allow the passage of imperfectly prepared food, and that such food was returned from the back to the front of the mouth by an involuntary though eventually controllable muscular effort.

Careful investigation reveals the following results when the rules laid down by Dr. Fletcher are followed:

First. Food as it is masticated slowly passes to the back of the mouth, where it remains in contact with the mucous membrane containing the sensory end organs of taste.

Second. If properly dissolved by the saliva, it is allowed to pass the fauces, a truly involuntary act of swallowing occurring.

Third. Let the food, however, be passed back to the fauces before complete reduction takes place, and the reflex muscular movement occurs. That is to say, the food is not allowed to pass until chemical change has taken place as a result of thorough mastication.

In the course of Dr. Van Someren's experiments at the time he made his report, eighty-one individuals of different nationalities, and from different classes of society, were studied, experimented with, and came into possession of the reflexes as above described.

This would seem to be sufficient proof that Dr. Fletcher has discovered the natural laws of correct eating.

Patience is required to recover this reflex of swallowing; it takes time to change the habits of a lifetime. Four weeks is the shortest time in which it can be accomplished, and then it can be acquired only by avoiding conversation and concentrating the attention on keeping the food in the mouth until complete alkaline reduction has taken place.

Authorities almost all agree that as a rule people eat too much. This is usually due to the fact that food is not properly masticated, so that much of it ferments and putrifies instead of being digested and assimilated.

Thus much more seems to be called for than Nature really demands.

Nature will demand much less for her complete satisfaction when all the food taken is so thoroughly chewed that the system can adjust and assimilate it.

These facts all appeal to the common sense of any reasoning being who really gives them serious thought.

The old maxim, "The proof of the pudding is in the eating," finds verification in the case of Mr. Fletcher. He practices what he preaches, and his own powers of endurance are eloquent proof of the truth of what he teaches.

Tests were once made at Yale under the direction of Professor R. H. Chittenden. After the tests Professor Chittenden stated as follows:

"In February I had Horace Fletcher at Yale.

"His average daily amount of protein was 45.21 grams, less than one-half Voight standard; and this apparent deficiency in proteid foods was not made good by any large consumption of fats or carbohydrates.

"The diet was a prepared cereal food—milk and maple sugar taken twice a day for seven days. Mr. Fletcher took such amounts as his appetite craved. He worked in the gymnasium under Dr. Anderson, at the same kind of exercise given the 'varsity crew.

"It is drastic and fatiguing, and cannot be done without soreness and pain resulting.

"The exercises were of a character to tax the heart and lungs as well as to try the muscles. Dr. Anderson says, 'I should not give these exercises to freshmen on account of their severity, but Mr. Fletcher has taken them with an ease that was unlooked for. He gives evidence of no soreness or lameness, no evidence of distress after the endurance test—that is, the long run. The heart is fast, but regular. It comes back to its normal beat quicker than does the heart of other men of his weight and age. The case is unusual, and I am surprised that he can do the work of trained athletes and not give marked evidence of over-exertion.'

"To appreciate the full significance of this report, it must be remembered that Mr. Fletcher had for several months past taken practically no exercise other than that involved in daily walks about town.

"The food which he ate cost eleven cents a day, and he had lived this way for five years.

"In a test in the Yale gymnasium in 1907, Mr. Fletcher

lifted a 300-pound weight 350 times in succession with the muscles of the right leg below the knee.

- "This same test was given the athletes of Yale University, and the highest record made by any of them was just one-half of Mr. Fletcher's, or only 175 times.

"Mr. Fletcher was fifty-eight years of age when he took the test. He took it without any special previous training and finished it without fatigue or soreness."

The following article from **The Literary Digest**, entitled "How to Chew One's Food," is a further confirmation of the endorsement of the science of eating as formulated by Mr. Fletcher on the part of conservative authorities:

"That it is important to chew one's food thoroughly is no new idea. It is embalmed in nursery adage and parental injunction, yet thorough mastication is certainly the exception rather than the rule. Owing to a recent crusade in its favor by Horace Fletcher, an English merchant resident in Italy, it is now proposed to speak of the "fletcherizing" of food that is thoroughly chewed. By a thorough mastication of the food, Mr. Fletcher means the prolongation of the process far beyond the usual degree, so that the food is reduced to a smooth paste and is swallowed without the least effort. It is certainly due to Mr. Fletcher's efforts that attention has been attracted to the subject of late. Says Dr. J. H. Kellogg in an article on the subject in *Good Health* (November):

"Mr. Fletcher made the interesting discovery that everybody eats too much—at least everybody who can get the chance or whose stomach is still tolerant. According to the results of experiments which Mr. Fletcher has made upon himself and others, the so-called daily ration that has been established by scientific authorities is at least fifty per cent larger than it ought to be, and even this is exceeded by

multitudes of hearty eaters. According to Mr. Fletcher's observation, a pound of water-free food is ample for anybody, and if care is taken to masticate the food thoroughly the amount actually required is considerably less.

"Mr. Fletcher's experiments, made under the most careful scientific supervision, have shown that if care is taken to chew the food four or five times as long as usual, the food is utilized to so much better advantage that its sustaining power is wonderfully increased, and hence the amount required is considerably diminished. This is a most important consideration, not only as regards economy in food, but as regards the greater economy in vital energy. The energy used in the digesting of food cannot be used in any other way; hence the large waste of energy which occurs through the neglect to masticate the food thoroughly must detract to a very considerable degree from the vital energy available for useful purposes. Mr. Fletcher has proved this to the satisfaction of the most eminent scientific critics, both in England and in this country. The military department of the United States government, recognizing the importance of this question in relation to army regimen, has detailed twenty men to give their entire time for several months to an exhaustive series of researches, the aim of which will be to subject Mr. Fletcher's claims to the crucial test of an exhaustive experimentation.

"If Mr. Fletcher's theories are confirmed, and if the public can be educated to their adoption, the result will be an enormous saving. The amount of food material may be reduced at least one-third, and the cost may be, to say the least, enormously reduced. Suppose, for example, the actual saving in quantity may be estimated at not less than one-half pound per day for each individual, which will amount to a saving for seventy million people in the United States of more than seventeen thousand tons daily. A ton of flour,

one of the cheapest of foods, is worth at the present time about sixty dollars. Seventeen thousand tons of flour would have a value of about \$1,020,000. The saving of this enormous sum daily would, in a few years, pay off the national debt and be sufficient to provide the comforts of life to every needy person in the country. This is proof that the dietetic reform may be made the foundation for a great and thorough-going social reform; may be made to solve economic questions of the most tremendous importance. Mr. Fletcher argues that in this question of the proper mastication of food is to be found a key to the most serious problems relating to human welfare.'

"Another interesting observation of Mr. Fletcher's is that in properly chewed food there is a marked absence of those fermentations and putrefactions which are so often present in the stomach and small intestines, forming poisonous substances, which permeate the tissues, interfering with the vital functions and causing a variety of diseases. The writer goes on to say:

"The small residue which results when the food is thoroughly masticated is remarkably aseptic. Putrescent processes are almost altogether absent. Fecal matters are comparatively inoffensive and greatly diminished in amount, and one of the greatest burdens under which the body struggles through the necessity for eliminating from the skin, the lungs, and other excretory organs the enormous quantities of poisons produced by the decomposition of foodstuffs in the alimentary canal, is lifted, and, as the result, the individual experiences a lightness and clearness of intellect, increased vigor, endurance, and resistance of disease, which is almost past belief until one has actually experienced this delightful transformation. . . . Any one can easily demonstrate the truth of Mr. Fletcher's contention by experimenting upon himself. The habit of chewing thoroughly is very easily and

quickly acquired, and when once the habit is formed, the increased satisfaction experienced in eating, the marked increase of energy, and the sense of well-being which result from this manner of eating, become sufficient incentives to lead to the continuance of the practice."

The writer of the above article may have over-estimated the ease with which the habit of "fletcherizing" can be acquired. But after all, the effort expended, even if it takes four weeks to acquire the habit, is not too great a price to pay for the decided reward which is bound to come to him who masters and applies the science of right eating.

A final word. The reader who has studied the Science of Business up to this point should have come to a realization of the importance and the real value to himself of his physical body.

The facts set forth in this chapter concerning the natural laws of correct eating cannot be successfully denied. They are facts, not theories; facts demonstrated by science. The common-sense course to take is to make the daily life conform to these facts.

The facts represent Nature's laws, which cannot be violated with impunity. The responsibility of the individual increases in direct proportion to his enlightenment. Ignorance of the law excuses no one from paying the penalty for its violation, but knowledge of the law increases the moral accountability and personal responsibility of him who knows the law.

You and I—yes, let's make this a personal problem—are now responsible to self, to others, and to the Giver of this great gift, the human body, to see to it that we obey the laws we now know.

Summary

First. The endurance of the individual varies directly with his habits of correct eating.

Second. The right quality and right quantity of food and the right mode or manner of eating build the body and generate the power of endurance.

Third. Food should be pure and contain elements of real nourishment.

Fourth. Natural hunger is a good guide to the kind of food needed, and would be infallible were it not for the cultivation of false appetites.

Fifth. With the cultivation of false appetites many people dig their graves with their teeth.

Sixth. Our bodies are built by the air we breathe, the liquids we drink, and the food we eat.

Seventh. Blood is the river of life. Wrong quality and quantity of food and wrong mode of eating poison the river of life at its source.

Eighth. Nature, if consulted and not thwarted, settles for us the question of what to eat, how much to eat, and how to eat.

Ninth. Almost all authorities agree that most people eat too much.

Tenth. Almost all authorities agree that most people eat too fast.

Eleventh. Five excellent rules: (1) Wait for true hunger before eating; (2) select the food which appeals most to the natural desire; (3) hold the food in the mouth until it is involuntarily swallowed; (4) enjoy the taste to the full; allow no depressing or diverting feelings to interfere; (5) take plenty of time for eating any meal, and eat slowly.

Twelfth. The common-sense course is to make the daily life conform to the facts set forth in this chapter.

CHAPTER VI

THE LAW OF CLEANSING

JOHAN WESLEY said: "Cleanliness is next to godliness." A modern divine has said: "Cleanliness is godliness."

To cleanse means to render clean. Just as a clean physical body cannot keep clean in a filthy house, so the intellect, sensibilities, and will cannot keep clean in a filthy body.

Other things being equal, the endurance of the individual varies directly with his habits of right cleansing.

A clean body without and within is the first step toward a clean mind. The body is literally the house in which the soul dwells.

There are two parts of the body which must be kept clean if the maximum of endurance is to be enjoyed: namely, the outside and the inside.

To do this, there are but three things required:

1. Bathe all parts of the exterior of the body.
2. Brush the teeth.
3. Attend to getting rid of bodily waste.

Bathing. Bathing serves two purposes: (1) It cleanses the skin by removing the excretions, dust, and other foreign substances which adhere to it;

(2) it stimulates the skin to greater activity, thus encouraging free elimination of waste matter.

For these two reasons, if for no others, bathing increases endurance. It should be regular and frequent, and should be indulged in with intelligence and care.

Either a definite beneficial or a harmful effect can be produced by the use of water, as surely as with other seemingly more powerful agents.

The foundation of many successful curative systems is an intelligent use of water, while on the other hand many are injured by its injudicious use.

Warm water has a relaxing effect upon the tissues of the body; cold water has a contracting effect upon the tissues of the body. Warm baths are therefore sedative in their effect, and should be taken in the evening; cold baths are stimulating in their effect and should be taken in the morning.

Proper temperature of the bath depends largely upon the temperament of the individual. Those of the magnetic temperament are sensitive to cold and rarely benefited by taking very cold baths. As a rule, a warm bath followed by a cool rubdown or cool sponge bath in the morning is to them beneficial.

The electric temperament is sensitive to heat, and as a rule cannot take frequent warm or hot baths with comfort and with beneficial effects. On the law of averages, a cold bath in the morning and a

tepid one at night are more beneficial to the electric temperament.

These questions, however, require the application of common sense, and no invariable rules can be laid down. Each should study his particular type in this respect, and then let common sense be his guide in the matter. A shower or plunge bath is good, but all are not provided with the facilities to take them. There is no valid excuse, however, for any one failing to bathe.

Every one bathes face and hands, and if he has awakened to a realization of the value of his natural possession—the physical body—and the importance of keeping all parts of it clean, he can provide ways and means to wash the arm pits and groins and feet as regularly as he washes his face and hands.

The removal of excretions resulting from perspiration is essential to that degree of cleanliness which begets endurance.

From experiments communicated to the Paris Academy of Sciences by M. Arloing it has been proved that perspiration from a healthy man, injected into a dog, will kill the animal in from one to three days.

Perspiration excreted during severe muscular labor is from one quarter to one third more poisonous than at other times.

If excretions from perspiration are not removed, they are absorbed through the pores of the skin

and thus poison the body, and gradually undermine its power of endurance.

Care of the teeth. The maximum of endurance development makes good care of the teeth an absolute essential.

It has been stated on good authority that there is an intimate relation between the teeth and the stomach, and that a large proportion of our stomach troubles are the result of decaying teeth.

It is a well-known fact that when a recruit wishes to join the army, one of the first tests to which he is subjected is a careful examination of the teeth. In the armies of nearly all countries, decayed teeth is sufficient cause for the immediate rejection of the applicant.

Many diseases of the mouth, stomach, intestines, and other vital organs are, in fact, traceable directly to lack of care of the teeth. Thousands of deaths are attributable directly to carelessness in this regard. The teeth should be examined at least twice a year by a competent dentist. At first thought, many might say they couldn't afford such an expense. As a matter of fact, if it is made a regular practice the expense is far less in the long run, for the simple reason that the teeth are then kept in good condition, and never require the heavy expenditures which become necessary for dental bills if the teeth are neglected.

As the old proverb runs: "An ounce of preven-

tion is worth a pound of cure." It has been stated by dentists that if every one thoroughly brushed his teeth before retiring at night and upon arising in the morning, nearly all dentists would have to go out of business.

Good teeth are necessary for the proper mastication of food.

This law of right cleansing is, therefore, intimately related to the law of right eating.

Good teeth are also an essential factor for the best possible personal appearance, and this, in turn, is a big factor in getting that first necessary effect in the mind of those with whom one comes in contact: namely, favorable attention.

Good teeth kept clean are also essential for sweet breath. No one has the right to disgust and sicken his associates with a foul breath; there are but few more certain roads to the getting of unfavorable attention, to say nothing of the evidence, of which its presence is conclusive, of poisonous influences destructive of endurance.

Common sense brings any one who stops to think about it face to face with the fact that it is an impossibility to eat one's food without particles of food becoming lodged between the teeth. Common sense also leads one to the conclusion that unless these particles are removed they will soon become putrid, and result in destructive consequences.

The common-sense conclusion is, therefore, to brush the teeth and clean the mouth at least twice a day. Any one who fails to do this is violating natural law—an important law of endurance development—and if he persists in violating the law, sooner or later he must pay severe penalties.

Internal cleansing. In the absence of investigation it is but natural for one to suppose that Nature, through her purely natural processes, attends to the cleansing of the internal body.

This undoubtedly would be true if each of the organs were performing its function properly.

The fact remains, however, that due to violation of many of the seven laws which are being made plain in this lesson, and in some cases to the violation of all of them, the physical organs in very many cases are not performing their functions properly.

As a result of this, it is a well-demonstrated fact that a great quantity of fecal matter remains in the body much longer than it should.

Professor Vinton of Chicago, a well-known specialist in this particular field, has made it his business to study the human organism, and as a result he, like many others who have given the matter careful thought and serious investigation, has become an enthusiastic advocate of what is known as "the internal bath."

We quote from him as follows:

"When one has eaten a mixture of foods which are indigestible, the stomach will not do its work. It is like a sour swill tub, a sour mash, a distillery, and the food passes into the intestines largely undigested. The glands soon become overworked, and fermentation goes on very rapidly. Here the absorbents are at work in earnest, and they take up and carry these poisonous fermentations into the blood.

"The blood takes them to the brain, the lungs, the liver, the kidneys, and the skin.

"The results are headache; irritable, sallow skin, etc. When the body gets into this condition—it is chronic with some people—the brain is loaded with acid matters, one's temper is not the best; indeed, one is not fit to do business and is poor company for any one.

"When the waste matter is discharged from the intestines into the colon, it has a slower movement. The colon, or lower bowel, is the big sewer of the body, and its contents should be quickly discharged.

"This is not accomplished, however, with the majority of promiscuous eaters. With them, constipation is the rule.

"It is a well-known fact by those who have investigated the subject that many people have fecal matter in their colon which has lain there for years with a thick crust that adheres to the wall of the colon, under which worms have collected.

"One may have a bowel movement every day, but that is no sign that he has a clean colon, and physic will not clear it out. What one needs in such a case is an internal bath. For this one simply needs a colon fountain syringe at least two feet long,—one which will traverse the whole length of the colon. Do not use a short tube two or three inches long. Get a long tube and use a fountain syringe."

Dr. W. T. Turner states that seven-tenths of the

human family are diseased. He further states in his new **Hygienic Treatment** as follows :

"The writer's experience from day to day in his sanitary treatment of emptying the colon reveals startling disclosures in the form of worms, maggots, and nests of broken eggs, broken up and brought away, accompanied by blood and pus.

"It is a known fact that physic will not remove or even loosen the encrusted matter, in many cases as dry and hard as slate."

Professor Vinton further states as follows :

"Is it any wonder, in view of the above facts, that people die of premature old age, of apoplexy, paralysis, dropsy, liver complaint, Bright's disease, catarrh, epilepsy, rectal diseases, rheumatism, and so on through the whole category of physical troubles?

"In many cases these are caused by inflammation and distention of the colon. Spinal irritation and nearly all the acute diseases, skin diseases, and impurity of the blood are caused from the filthy condition of the inside of the body,—the engorged colon.

"Physicians have stated to me that in their work in the dissecting room they have often found the colon so distended as to be as large as the arm below the elbow, and filled with filth. This filth the lacteals are absorbing into the circulation.

"The more I investigate this line of thought, and explore the realm of the colon, the more I am convinced that in the colon lies the cause of nearly all the physical ills of this generation.

"All systems of hydropathy have used some form of enema; that is, a syringe; but most of them have used only a short tube, which is objectionable, for the reason that the peristaltic action of the bowels rejects the flow of the water.

"The high enema is now mostly given with a rubber tube

two feet or longer. The colon is five feet long, and should be flushed its entire length, and it cannot be done with one flushing.

"It should be kept up for ten days, three times each flushing, using two or three quarts of warm water. Begin with water a little warmer than the blood, and after a little as warm as you can bear your hand in it.

"The first time use clear water, the second time with a milky soap, vegetable consistency (any good vegetable soap will do). The third time use clear water in which you have three drops of oil of eucalyptus, the object of the oil being for disinfecting and the removing of entozoa and all kinds of worms.

"This custom of flushing the colon is practiced in all Oriental countries. It is supposed to have originated among the Egyptians.

"Any good druggist can furnish the necessary paraphernalia for the internal bath."

Professor Vinton advises the ordering of the colon tube No. 23.

The five laws of correct nourishment. We have now considered five of the tributary laws related to the principle which lies at the base of all physical growth and development, namely:

1. The law of mentation,
2. The law of breathing,
3. The law of drinking,
4. The law of eating,
5. The law of cleansing.

These are all laws of correct Nourishment. They are the afferent laws of man's physical well being,

the laws by means of which his physical body receives nourishment. He who obeys these five laws, will have a well-nourished body.

In our next chapter we shall consider the first efferent law: the body must be correctly used, as well as correctly nourished.

Summary

First. The endurance of the individual varies directly with the habits of right cleansing.

Second. If the maximum of endurance is to be enjoyed the body must be kept clean inside and outside.

Third. Bathing cleanses the skin, stimulates the skin to greater activity, and increases endurance.

Fourth. Proper temperature of the bath depends largely upon the temperament of the individual.

Fifth. Excretions from perspiration are poisonous. If not removed by bathing and rubbing, they are absorbed through the pores, poison the body, and reduce endurance.

Sixth. Intelligent and diligent care of the teeth is essential to a maximum development of endurance.

Seventh. The twice-a-day habit of brushing the teeth will go far toward eliminating the dentist's bill.

Eighth. Good teeth are necessary for proper mastication of food, for a good breath, and for personal appearance.

Ninth. Good teeth kept clean are thus a big factor in getting favorable attention.

Tenth. Due to violation of some or all of the laws of health, fecal matter remains in the body longer than it should.

Eleventh. This fact makes important the cleansing of the inside of the body by the internal bath.

Twelfth. Physic will not clean the colon of the promiscuous eater.

Thirteenth. The colon is the big sewer of the body and should be occasionally flushed, by an internal bath.

Fourteenth. He who obeys the five laws of mien-tation, breathing, drinking, eating, and cleansing will have a well-nourished body.

CHAPTER VII

THE LAW OF EXERCISE

"DIVERSE men have diverse recreations and exercises."

The word "exercise" comes from the Latin roots **ex**, "out", and **arcere**, "to shut up, inclose". Its meaning is "use—application."

Webster defines the word as meaning "bodily exertion for the sake of keeping the organs and functions in a healthy state."

Broadly speaking, exercise applies to the four departments of man's being,—intellect, sensibilities, body, and will. In this lesson we use it as Webster above defines it as applicable to the physical body.

Other things being equal, the endurance of the individual varies directly with his habits of Exercise.

The fact has already been made plain that the "use" element is one of Nature's two essentials for growth. Without it, no matter how well one might nourish his body through the laws already made plain, it would be an impossibility for him to grow—develop—should he fail to put into operation the use or **exercise** principle. In fact, if all activity of the body were to stop, life would be immediately

extinguished, for the simple reason that the act of breathing requires muscular activity.

Breathing, drinking, eating, and cleansing all demand motion or exercise to some degree.

Thus do we see the indissoluble union between the afferent and the efferent processes—the receiving and the giving principles—to which life resolves itself.

All modes of human exercise may be divided into three classes of acts: (1) work, (2) play or recreation, and (3) special exercises.

The Daily Work. There are few vocations, even those in which manual labor is severe, in which all parts of the body are exercised.

In nearly every supposedly normal human being there are a great many muscles which are slowly dying from lack of exercise.

In this fact is revealed one of the great secrets of the relatively brief span of human life on the part of those who “die of old age,” that is, whose span of life is not terminated by accident or disease.

Through lack of exercise of parts of the body, even though other parts may be having plenty of it, the unused tissues atrophy and the body becomes to that extent dead. This hinders health, greatly decreases endurance, and lessens the length of life.

The fact that one is engaged in manual labor does not do away with the necessity for exercises

such as, will be outlined a little later in this chapter. Those who do office work, working almost wholly with the head instead of the hand, naturally need more of these special exercises, but all need them.

If one is not naturally hungry for exercise, he should make himself so. This hunger can be cultivated, although in some cases difficult of cultivation.

In one's daily work, in order to fulfill all the conditions of the law of exercise, he must obey the rules of correct breathing as already outlined, notably the cultivation of the practice of breaking at the hips instead of at the chest.

Recreation (play). "All work and no play makes Jack a dull boy," is an old adage expressive of a truth most intimately related to the problem of endurance development. It seems to have been forgotten by many men and women, especially those who bear the burdens of proprietorship. In humanity taken as a whole, however, are to be found many who go to the other extreme. Instead of loving their work, and loving it while at work—instead of concentrating their minds upon it—they are looking for quitting time to come, and are generally afflicted with the disease of clock watching.

Such people are usually anxious to get away from their work, get their evening meal, and then have what they consider "a good time," which may or may not be a really pleasurable time from the

standpoint of permanent happiness. It may not be a "re-creative" time at all. It certainly is n't if spent in hilarious revelry, as is all too often the case.

To recreate means to "re-create"—to create again, to form anew.

During the day, the strain of one's regular business, or "busy-ness," has torn down the tissues of the body, including brain tissue. When the strain of the day's work is over, the sensible thing to do is to begin to recreate, and the road to this is plain—recreation.

Webster tells us that to "recreate" is to "give fresh life to, to reanimate, to revive; especially, to refresh after wear, toil, or anxiety; to relieve, to cheer, to divert, to amuse, to gratify."

Concentration is always necessary for the successful performance of any undertaking.

He who would do extraordinary things must needs frequently work far more than eight hours a day. But opposite extremes are equal, and "keeping at it" all the time is destructive.

If one loves to work at night, or must needs do so to accomplish his ideal, he must make it a rule to take some time each day for recreation, if he is to live in harmony with the law of endurance.

The recreation may be music, it may be reading good books, playing tennis, baseball, golf, whist, chess, dominoes, horseback riding, motoring, walking, pitching quoits. It may be a hobby, such as

the study of botany. The list of constructive recreations possible would be indeed a long one if completely compiled, and varied enough so that through selection the tastes and inclination of any one might be gratified.

Idleness is not rest, except for the necessary relaxation, and that does not take much time.

Special exercises. Even the activities of one's daily business, plus activities incident to recreation, do not result in the use of all parts of the body. To accomplish this, special exercises are necessary.

History is replete with examples of the constructive results gained by those who cultivate the habit of taking special exercises and thus using all parts of the body.

The individual who exercises right during his daily work, who takes proper recreation, and in addition to these two modes of exercise makes it a habit of his daily life to take certain special exercises, is more than likely to become the marked man, the remarkable man, the man who rises above the mass.

There are many notable instances of people who were born with weak bodies, but who ultimately cultivated remarkable powers of endurance, through obedience to the law of exercise.

Swoboda was born a weakling; the same was true of Sandow, and of Theodore Roosevelt.

It is undoubtedly true that Mr. Roosevelt owes,

largely to obedience to this law, the remarkable constitution which has enabled him to do remarkable things. When president he was probably one of the busiest men in the world, but he insisted upon taking the necessary time to exercise.

Before outlining special exercises, we would call attention to the following facts:

First. Exercise develops the areas of the brain. (See Lesson Three, Chapter II.) Proper exercise is an absolute essential for the development of the gray matter of the brain. Intellectual development is therefore dependent upon it.

Nature insists upon exercise from the very beginning of the child's life. The infant's instinctive, ceaseless activity of feet, toes, hands, and fingers is Nature's method for insuring brain development.

There is a most intimate relationship between hand and brain; between doing and thinking. In order to develop the whole motor area of the brain, there must be a rich and full exercise of the muscular system of the entire body.

Varied muscular exercise is an absolutely necessary element for a round, sound, healthy, and well-balanced development of the brain.

Second. Exercise aids digestion, assimilation of food, and distribution of nourishment. It is, in fact, essential to them: it assists in distributing nourishment to the part exercised.

The blood flows to each part, rushing there to carry new material to replace the effete or waste

products caused by the regular processes of life. If the body is exercised uniformly, the nourishment is evenly distributed. By fitting exercises the blood may be attracted away from one part and directed to another.

Congestion—too much blood pressure in one locality—may thus be relieved, and, conversely, too little blood pressure in another locality corrected.

When one thinks, the blood flows to the brain.

When one jumps or walks, the blood goes to the legs and feet.

When one inhales, holds the breath, and contracts the muscles between the ribs, it flushes the solar plexus and near-by tissues.

It is a law of life that the flow of blood is toward the part of the body exercised.

Third. Exercise assists the excretion of waste material through the skin and other organs of elimination.

Fourth. Exercise begets strength. Without exercise the development of muscular strength is absolutely impossible.

Fifth. Exercise begets symmetry. Symmetrical development is a commercial asset of great value. It is a potent influence in securing the favorable attention of those with whom one comes in contact.

Beauty of form is as large a part of Nature as is strength and utility.

Lack of exercise, therefore, hinders brain devel-

opment, retards digestion, assimilation, and proper distribution of nourishment, causes weakness, lack of symmetry, and promotes disease.

The rules for correct exercise are few and simple. There are only four, in fact, and they may be stated as follows:

1. Exercise without apparatus.
2. Cultivate the feeling of hunger for exercise.
3. Exercise just enough.
4. Exercise as much as possible in the open air.

Exercise without apparatus. There are good reasons for this rule.

First. By so doing one uses the weights and levers which Nature has provided.

Second. Exercising without weights and other apparatus prevents enlargement of blood vessels, which frequently results when apparatus is used.

In the taking of special exercises, one should use only muscular resistance coming from the antagonism of one muscle against another.

Let us illustrate exactly what we mean by an example. Take the muscles of the upper arm. When the biceps—which is the muscle of the upper part—contracts, it shortens and bends the arm at the elbow. When the triceps—which is the muscle of the lower part—contracts, it shortens and straightens the arm out. If both muscles were pulling at the same time and with equal force, the arm would remain rigid.

But the idea involved in the principle of muscular resistance, or antagonism, thus exercising without the use of apparatus, is not to make the arm entirely rigid, but to oppose one muscle with the other in such wise that all motion is prevented or checked, and the muscles remain tense, as when you are ready for a spring or prepared to strike a blow with the arm and fist, but neither jump nor strike.

This is called "energizing."

Having energized, and caused momentary cessation of all motion, then one of the opposing muscles is gradually relaxed, thus permitting the same effect as if one were raising an actual weight.

Having lifted an imaginary one hundred, two hundred, or three hundred pound weight above one's head, he can let go of it without encountering any mishaps, which would be more than likely to happen were he lifting the actual weight.

As he relieves the tension by a complete momentary relaxation, the blood, which had been stopped in the veins and arteries, proceeds on its course. This it cannot do when actual weights, such as heavy dumb-bells, are being gripped by the hand.

If one learns to exercise every muscle of his body without apparatus, he is independent of all gymnasiums. He will have his own "gym" with him all the time, for the simple reason that he always carries his muscle with him.

Cultivate the feeling of hunger for exercise. Sometimes, as already stated, this hunger of exercise must be cultivated. But this can be done just as appetites for foods can be cultivated.

When exercises are taken mechanically, perfunctorily, with the feeling that one wishes to get rid of a disagreeable duty as soon as possible, they never produce the maximum of desired effects. The feeling of impatience and nervous tension counteracts the beneficial effects.

It is far better as a rule, however, to force oneself to take special exercises than not to take them at all. Indeed, the forcing of oneself to take special exercises is generally necessary until the hunger for them has been acquired.

In the vast majority of cases, the feeling of hunger for exercise outside of that which comes from recreation (games and pastimes) is an acquired feeling and must be cultivated.

There are times in every life when complete rest and relaxation are needed instead of special exercises. Common sense must be utilized in the regulation of this matter, and, if necessary, the advice of a competent physician sought.

Exercise just enough. This means the observance of the golden mean.

One should always remember the law that evil is oftentimes but over-ripe good. Exercise is no exception to this rule. Temperance is the con-

structive order in all things. To exercise when one is exhausted is passing the pivotal point and violating the law of the golden mean.

One should never exercise when Nature demands absolute rest. Nature furnishes the guide in this matter through the feeling of fatigue, which is Nature's danger signal and means "Stop."

The muscles are continually undergoing change of material. The minute substances which make up muscles, the unceasing actions of which keep them alive, are being continually cast off, fresh substances taking their places.

This cast-off material carries with it the fatigue poison.

Without muscle-rest this dead substance cannot be replaced fast enough by the new products and the result is impoverished elements. This applies not only to the muscles in active use up to this point, but to all muscles of the body. The energy-particles of food are delivered to the muscle by the blood. This fluid then picks up and carries away the cast-off, dead substances of the muscle.

If the muscle is given an interval of rest so that the cell can give off its waste product, to keep pace with the new productions the muscle will then liberate energy for a long time.

This latter condition is literally **endurance**.

The test, then, of this great quality of endurance will depend upon (1) the condition of the blood

and vital organs; (2) how thoroughly and how rapidly they carry off the quickly formed poisonous products and supply fresh material to each collapsed muscular fiber and cell.

This fresh material must be the nitrates, the proteids, the albumenoids, and the nitrogenous foods.

Thus do we see again the interdependence of all of Nature's laws of physical endurance, or the interrelationship each with the other: right food contributes to it; right breathing is necessary for it; right exercise is an absolute essential—for all contribute toward the elimination of waste products and toward the supply of fresh material to the blood, "the river of life."

Exercise as much as possible in the open air. When the morning exercises are taken in one's room the windows must be open if the best results are to be obtained. This should be done even in the coldest weather.

Any one can make it possible to take many special exercises in Nature's great out of doors. Where there is a will there is a way, and this matter of taking exercises in the open air is no exception to this basic rule.

Special exercises. We shall now outline two exercises which should be used daily by every one. We shall then follow these two exercises with a list of special forms from which judicious selection should be made.

Under no circumstances should any one even try

to take all of these exercises, at least not at the beginning of his cultivation of the habit of exercising.

Exercises which would be immensely beneficial to one, would be positively harmful to another. Having resolved to practice special exercises, one should consult a specialist in physical culture as to just which of the following exercises would be best suited to his particular needs. If such a specialist is not available, a competent physician should be consulted.

The Correspondence Division of the Sheldon School stands ready at all times to give special advice and counsel when asked for, but manifestly accurate advice in this direction cannot be given except by personal interview.

The Exercises

We begin with two exercises which should be used daily by one and all, and then follow with a list of special forms from which, as previously explained, a wise selection should be made.

For all. 1. Massage. Place the palm of the hand flatly and firmly on the skin and then move it right and left, up and down, in circle to the right and finally in circle to the left. Do this on every part of the entire body from scalp to feet. This quickens the action of all ligaments, tissues, blood vessels, vital organs, and nerves.

2. Kneading the flesh. Grasp the skin between

the thick part of the thumb and fingers and press same without pinching it. Go over every part of the body. It is especially good for the complexion. It keeps everything physical in activity.

Importance of abdominal muscles. You will observe that many of the exercises given are for the abdominal muscles. In civilized man these are but little used and thus they become flabby and soft. They should be among the best developed muscles of the body. I have striven not to be technical in this lesson and have avoided all use of technical terms and descriptions as far as possible. But this matter is so important that I desire to describe to you the magnificent muscles we are considering.

At the sides of the abdomen and partially in front lie three pairs of greatly expanded muscles—the external oblique, the internal oblique, and the transverse. The internal oblique and the transverse muscles are attached above the ribs and spine and below to a strong band, Poupart's ligament. The external obliques have similar connections above and below, but are not attached to the spine. In front of the abdomen are two pairs of muscles—the recti and pyramidal tendons, which blend together to form the *linea alba*, which stretches from the pubic bones to the sternum, or breast bone. These muscles form the walls of the great abdominal chamber and when properly developed can compress and knead the abdominal viscera con-

sciously, as they do unconsciously when the contents of the bowels and bladder are being expelled.

The following illustrated exercises represent the work of the best health teachers in the country and are standard. They are offered with confidence, for we know they will prove valuable.



FIG. 1



FIG. 2



FIG. 3

Body circling. The body turning on the hips describes as large a circle as possible from right to left and from left to right alternately. (Fig. 1.) This brings the abdominal muscles into rhythmic alternating activity, and is a most thorough stimulus to all the digestive functions. It can be used

for promoting evacuation and when this is desired, the movement is made in one direction only—from right to left.

Bowel circling. Another movement for stimulating the action of the bowels. They are rubbed or kneaded with one or both hands from left to right in circular motion. (Figs. 2 and 3.)

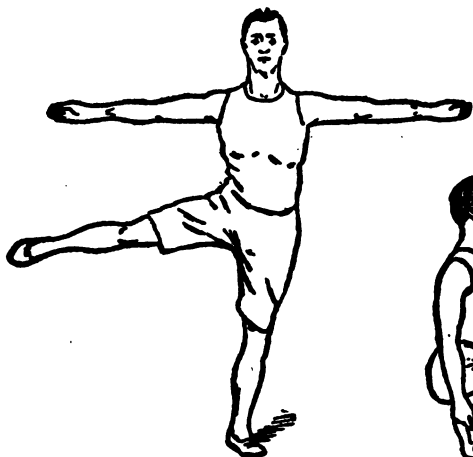


FIG. 4



FIG. 5

Leg-raising sideways. The fully extended leg is raised straight out at side, first right, then left. (Fig. 4.) The leg muscles will be employed, also those of the lower trunk in the back and flanks. It will relieve congestion in chest and head. Do this six, eight, ten times.

Leg circling. Let the circle be as large as possible from front to rear. Alternate four, six and eight times with each leg.

Knee exercise. Settling down with the heels firmly together, body upright and raised on toes, gradually settle down as far as possible. (Fig. 5.) The stretching muscles of the knees, calves, and



FIG. 6



FIG. 7

toes are chiefly used. It frees the muscles of all the joints, legs, and feet. Do this eight, sixteen, twenty-four times.

Knee raising. Raise the knee as high as possible, keeping the body immovable. (Fig. 6.) This is a vigorous exercise not only for the leg but also for the organs and muscles of the abdomen. For con-

stipation and sluggish digestion it is highly recommended. Do this four, eight, twelve times.

Trotting on base. This is an ordinary trotting movement, only no advance is made. (Fig. 7.) The points of the feet only are employed. Keep the joints of the knee and ankle pliable. Do this one hundred and three hundred times. Stimulates the circulation and evacuations. Good for cold feet.



FIG. 8



FIG. 9

Face down. Chest developer. Lie flat on the face, supporting the body on the hands and toes without touching the abdomen to the floor. (Fig. 8.) Move the body up and down by straightening and bending the elbows. Three times the first day, adding one more daily until the muscles tire.

For the abdominal muscles. Raise the head and shoulders and as much of the trunk as possible from the floor (Fig. 9), afterwards raising the feet

and legs (Fig. 10). Alternate, then raise both the head and feet in unison. Do this six, eight times.

For the spine and digestive organs. Raise the legs alternately (Fig. 11), first lying on the face, then



FIG. 10



FIG. 11



FIG. 12

on each side (Fig. 12). Point the toes down as far as possible without bending the knee; raise as high as possible, keeping the leg perfectly straight. Do this six, eight, ten times.



FIG. 13 .

For the abdominal organs. Lie on the side (Fig. 13), supporting the body so far as possible on the shoulders and feet, raising the hips from the floor, each side. Do this six, eight, ten times.



FIG. 14

For the neck. Lie on the side and move the neck up and down, first one side and then the other. (Fig. 14.) Do this ten, twelve, twenty times.

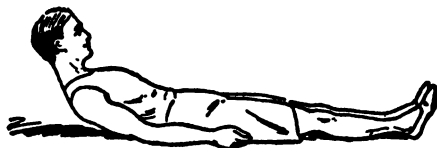


FIG. 15

Abdominal muscles. Turning now on the back, raise the head and shoulders (Fig. 15) until you come to that point where it will be necessary to

exert other muscles to bring you to a sitting position. Do not pass that point but simply raise the head and shoulders. Bend just below the breast



FIG. 16

bone, not the hips. Eight times the first day, adding one daily until you reach twenty-five times.

Raising the body. Fold the hands across the chest.

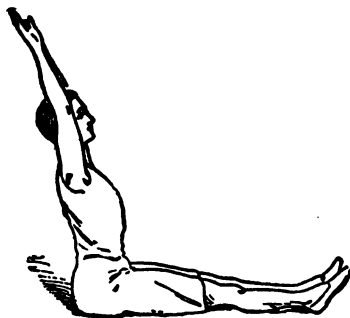


FIG. 17



FIG. 18

and raise the body to a sitting position. (Fig. 16.) It may be necessary at first to place the feet under something to hold them down. This is a vigorous

exercise, especially for the front abdominal muscles, and is recommended for all cases of constipation. Do this four, eight, twelve times.

For the back and abdomen. Lean back in sitting position, arms outstretched over the head, waist



FIG. 19

drawn in. (Fig. 17.) Reach slowly forward till the hands extend beyond the toes. (Fig. 18.) Pause, raise hands to first position. Do this eight and ten times. At first you may have to put the feet under something to hold them down.



FIG. 20

To strengthen the back. Lie on the back with hands under head. (Fig. 19.) Draw up the knees and raise the body so that it rests on the feet and shoulders. (Fig. 20.) Up and down ten, twenty times.

For the spine and hips. Lie flat on the back and

raise first one foot then the other. (Fig. 21.) Recommended for affections of the hip joints and chronic rheumatism or jointy conditions.

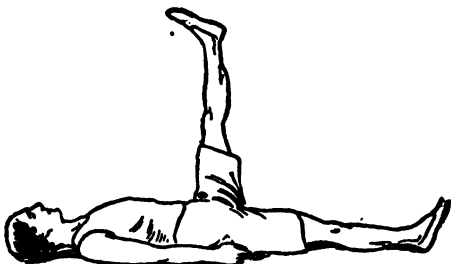


FIG. 21

For the abdominal muscles. Lie flat on the back and raise both feet at right angles to the body, first with hands at sides (Fig. 22), then under the



FIG. 22

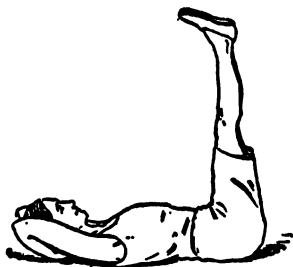


FIG. 23

head (Fig. 23). This is a severe test of the abdominal muscles, but a beneficial exercise.

For the lungs and digestive organs. Lie flat on

the back, arms at sides in line with the body. Draw up both knees and press them well to the chest, exhaling. (Fig. 24.) Extend legs, inhaling deeply, and repeat fifteen, twenty times.



FIG. 24

This exercise affects the lungs and digestive organs and should be done slowly, emphasizing the breathing.

Summary

First. The endurance of the individual varies directly with his habits of exercise.

Second. As here used, exercise means bodily exertion to the end of physical health.

Third. The "use" or exercise principle is one of Nature's two essentials for growth.

Fourth. All modes of exercise are included in work, play, and special training.

Fifth. Few if any vocations call into use all the muscles of the body.

Sixth. Lack of exercise causes the unused tissues to atrophy.

Seventh. Those who do office work particularly need special exercises.

Eighth. The hunger for bodily exercise can be cultivated. Begin by obeying the rules of correct breathing.

Ninth. Play is closely connected with the problem of Endurance Development.

Tenth. Play should be re-creative and not merely "a good time," or a killing of time.

Eleventh. Wholesome play, which is true recreation, may be found in different ways.

Twelfth. The value of exercise is fivefold: (1) exercise develops the brain areas; (2) exercise aids digestion, assimilation of food, and distribution of nourishment; (3) exercise assists the excretion of waste material through the skin and other organs of elimination; (4) exercise begets strength of muscle; (5) exercise begets symmetry of form.

Thirteenth. There are four rules for correct exercise: (1) exercise without apparatus; (2) cultivate the feeling of hunger for exercise; (3) exercise just enough; (4) exercise as much as possible in the open air.

Fourteenth. Two exercises should be taken daily by every one: (1) the massage; (2) the kneading the flesh.

Fifteenth. Exercises beneficial to one may be harmful to another. If in doubt as to what special exercises to take, consult a physician, or a specialist in physical culture.

CHAPTER VIII

THE LAW OF REST

WE have now considered Nature's five laws for the proper nourishment of the body. We have also considered the first of her laws pertaining to the right use of the body: namely, the law of exercise. In conclusion, we come to a consideration of the second law for the right use of the body, which is the law of rest.

Other things being equal, the endurance of the individual varies directly with his habits of relaxation and sleep.

This is the seventh natural law pertaining to the principle of correct nourishment plus correct use.

As indicated by the statement of the law, right rest involves two factors: (1) relaxation, and (2) sleep.

The word "relax" comes from the Latin *re*, "back, again," and *laxare*, "to loosen or slacken."

"Relaxation" is defined by Webster as "remission from tension and effort."

This is one of Nature's demands. It is an absolutely essential ingredient for right use. Right use

must be right in quantity as well as quality, and means neither too much nor too little.

Relaxation is the "art of letting go"—it is the art of relieving tension. Tired muscles and tired nerves demand this, and unless Nature's demand in this particular is granted, destructive results are bound to follow.

There are many people who neither understand nor practice the "art of letting go"; there are many who do not understand the philosophy of it, but who practice it unconsciously.

Either conscious or unconscious obedience to natural law brings reward; either conscious or unconscious disobedience of natural law demands the payment of penalty.

In the dynamic twentieth-century age there are many who through disobedience of the law of relaxation are paying severe penalties in undermined health and gradual loss of the power to endure.

Rules for relaxing. (1) Lie flat on the back; (2) let loose every muscle; (3) direct thought to each part of the body; (4) detect where you feel any strain.

Perhaps the forehead will be found to be puckered. If so, let go; loosen the muscles and nerves at that particular point by a voluntary act of the will.

Perhaps the tongue will be found to be pressing hard against the teeth.

Somewhere, those who have not practiced relaxation will be almost sure to find tension.

When it is found, the law of relaxation demands a voluntary act of the will to the end of forcing the nerves and muscles to "let go."

One who has n't tried this will be likely to be amazed at the refreshing effect of five minutes of this kind of relaxation, once he has begun to practice it.

It is said by specialists to be advisable in practicing the art of relaxation to lie with the feet a little higher than the head. The object of this is to enable the muscles which hold the vital organs in place to have the opportunity of taking a little rest also.

The effect upon the system of this posture in reclining is to reverse the system, as it were. The tracts of usual tension and strain in muscles, vital organs, brain, and nerves are relieved, rested, given time for recuperation, while other tracts assume the strain of gravity for the time being.

Specialists who have made a study of this phase of endurance claim that one can rest and recuperate more in ten minutes in this way than in twenty if the usual posture of reclining is followed; that is, with the head on pillow or headrest, higher than the feet and hips.

Some of our greatest captains of industry make it an invariable rule to lie down for a few moments at least, not less than two or three times during the day. Many provide themselves with facilities in their offices in cases where it is impossible to go home for lunch, so that a ten- or fifteen-minute nap can be taken before luncheon.

Whether this is feasible or not, it is feasible to relax, and all must do it or pay the penalty.

Many of our best business houses are adopting the practice of a five-minute recess at ten o'clock in the morning and again at three in the afternoon.

This practice rests on a scientific basis of endurance development, and the time is coming when every business house will follow it. It is not only humanitarian, but, like all real humanitarianism, it pays, for the time invested brings back dividends in increased efficiency.

During this recess time every one, from office boy up to president, should make it a rule of his life to "let go." He should relax in both mind and body.

The reclining posture is not necessary for a goodly degree of relaxation. The one trained in the art can relax while sitting down or while walking leisurely.

The noon hour should be an hour of relaxation as well as "re-creation." Indeed, the art of "letting go" is an essential element in recreation.

The scientific facts made plain in the preceding chapter render extensive comment concerning the beneficial physiological effects of relaxation, and the destructive effects of its lack, unnecessary at this point.

Follow the simple rules given in this chapter, and the power to endure will be materially increased.

Sleep. Sleep is indeed "tired Nature's sweet restorer."

The human organism is so constituted that it is not capable of continuous, uninterrupted activity of its intellectual, emotive, volitional, and physical activities without a more or less prolonged period of relaxation.

Even the heart rests between two beats.

The lungs rest between inhalation and exhalation.

The endurance of our forefathers and of the pioneers of any country is traceable very largely to their conscious or unconscious obedience to the law of rest as fulfilled in sleep.

Emerson, in a fine passage speaking of the men of strenuous activity in our own day, says that they are but expending the energy stored up during the quiet, well-balanced lives of their humble forefathers.

As so-called civilization advances, the "midnight oil"—or perhaps more properly, nowadays, the "midnight electricity"—habit creeps in. This liter-

ally involves the burning of the candle at both ends. The tendency toward nervous prostration, neurasthenia, hypochondria, and all their train of evils is largely due to the perversion of Nature through violation of the law of restful sleep. The functions of the body simply must be suspended in order that they may regain their strength and vigor.

Sleep is Nature's provision for carrying on this work of restoration.

In all there are millions of people who have formed false habits of sleep to such a degree that the restorative process is not of sufficient length to meet Nature's requirements.

In such cases the nervous system cannot become repaired and renewed, for the simple cause of lack of time in which to effect restorative processes.

Napoleon so cultivated the art of rest through sleep that he could sleep in the saddle and awaken refreshed and ready for the battle.

This is true of some of our modern captains of industry.

Nature's demand for sleep is indicated by a feeling of languor and a desire for rest. Whenever that feeling comes, under no circumstances should it be denied; to fight it off is violation of natural law.

Right sleep begets the clear eye, the clear brain, the steady hand—all great assets for the doing of the daily work as it should be done.

Too much sleep is as harmful as too little. Again

we see the law of the golden mean. Too much sleep renders the body feeble and languid, and the mind dull, melancholy, stupid, and indisposed for concentration on any subject. It also retards the circulation and diminishes the secretions.

When one is inclined to sleep too much, it is generally due to negative or destructive physical conditions.

The rules for cultivating the art of sound and refreshing sleep are as follows:

First. Think, remember, and imagine constructively. The science of doing this has been learned in Lesson Four.

Second. Cultivate the constructive sensibilities or feelings. The science of their cultivation has been learned in Lesson Five.

Third. Observe the laws made plain in Chapters I, II, III, IV, V, and VI, of this lesson devoted to health.

Fourth. Cultivate volition, the power to decide and act. The science of the cultivation of volition is taught in Lesson Seven.

The observance of the laws of correct eating and correct drinking necessitates the elimination of stimulants, and this, once made a habit, has a vital bearing upon the law of sleep.

The practice of sleeping in a well-ventilated room is also taken care of, through observance of the law of correct breathing, and this also has a vital influence upon sleep.

In addition to the basic rules above given, the following rules, more specific in their nature, will be found helpful:

1. Prepare for sleep as you would for any other important function of life.
2. Never retire in an angry mood.
3. Don't take your worries and cares to bed with you.
4. Think of sleep and retire to rest, in peace, with the knowledge and conviction that you will be strengthened by complete repose.
5. Every human being should sleep alone.
6. Always sleep between well-aired linen or cotton sheets.
7. Use enough covering to be comfortable, but never weight yourself down with heavy comforters or quilts.
8. Never sleep in garments worn during the day.
9. When you go to bed, don't hang on to it—"let it go." Allow the bed to hold you; don't try to hold the bed.
10. Practice the art of relaxation. Consciously relax every joint and muscle in the body. In this way make yourself "let go" of your body. Relax the spine particularly.
11. Never, under any circumstances, use a narcotic to induce sleep. Such practice is most destructive.
12. After you are in bed, make up your mind to

enjoy a good sound sleep. Practice resolution and determination as you do in other important things in life.

13. Refuse to entertain anxieties and perplexities which may have afflicted you. Refuse to torment yourself by thinking of your troubles. Remember that for every bridge crossed a hundred have been built in the mind.

Follow the above counsels, and natural sleep will be the natural consequence.

Conclusion. We have now considered Nature's seven rules or laws for the correct nourishment and correct use of the body. Obedience to them brings health and the power to endure, as a natural effect.

The several processes may be illustrated by the diagram on page 115.

A study of the diagram reveals the following facts: (1) Each of the laws rests upon health—the state of being whole, sound, hale; (2) the generic center (cause) is correct mentation, the core of which is right thinking. If that is taken care of, all the rest follow.

But very few, if any, will completely obey the other six laws unless they first “stop to think” about them.

✓ Right thinking leads to right breathing, drinking, eating, cleansing, exercising, and resting.

The composite result of obedience is **health**—that

state of being whole, sound, hale; and the sum of all makes endurance—the power of sustained effort—an absolute essential for quantity of work done,

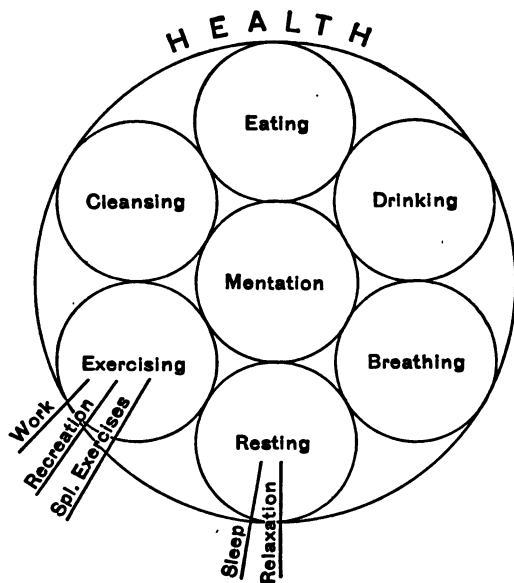


FIG. 25

also a necessary ingredient in quality, and the sum of all, including abundant and abiding health with its consequent good cheer, is an essential constituent in correct mode of conduct.

Thus do we see the vital relationship of this problem of endurance development to the principle of Service, the source of progressively profitable patronage.

The best way to obey these laws is to arrange a daily program and then follow it.

The following is the proper arrangement of the seven laws, in daily program form:

Thinking comes first. Thinking begins at the moment of the dawning of consciousness. To think is the very first thing that every one does at the moment of waking.

If one will see to it that he thinks right for the first ten minutes, he will find it a big help to keep on thinking right the whole day through.

Every one should make it a rule to get up as soon as he wakes.

The second thing which he should always do is to go to the window and take his breathing exercises. At the time of taking them he should drink a glass or two of pure water and see to it that he drinks it in accordance with the laws of correct drinking, as already outlined.

Having thoroughly oxygenized his lungs, he should begin his special bodily exercises.

Having finished this, he obeys the law of cleansing. In other words, he takes his bath and brushes his teeth.

By this time he is ready for the morning meal,

and has the opportunity to put into practice the laws of correct eating.

Shortly after, his day's work begins. During the day, the one who is practicing the Science of Endurance Development will stop occasionally to relax, even if but a moment or two.

After his day's work is done, he forgets all about business and takes some healthful recreation, thus permitting his body and mind to "re-create."

Having done all these things, he sleeps right as a natural consequence.

He who practices the Science of Endurance will be able to travel a long distance and still be in good condition when he arrives.

The whole secret of obedience to the natural laws of physical well being nestles in the one word—habit. Spasmodic efforts directed toward the obedience of any or all of Nature's seven rules for health and endurance development count for but little. Permanent results are obtainable only when practices have ripened into habit.

Habit formation is a function of volition.

Thus the Science of Business, in its treatment of its first great branch of study—the Science of Man Building—has "saved the best wine till the last."

Our next lesson is devoted entirely to the Science of the Development of Volition and the sum of all the mental processes, the human will.

Summary

First. The endurance of the individual varies directly with his habits of relaxation and sleep.

Second. Right rest requires relaxation and sleep.

Third. Four rules for relaxing are: (1) lie flat on the back; (2) let loose every muscle; (3) direct thought to each part of the body; (4) detect where you feel strain and loosen the muscles and nerves at that point, by an act of will.

Fourth. While desirable, the reclining position is not necessary for a goodly degree of relaxation; this can also be obtained while sitting or walking.

Fifth. The human organism requires rest.

Sixth. Sleep is Nature's provision to carry on the work of restoration.

Seventh. When a feeling of languor and desire for rest comes the impulse to sleep should not be denied.

Eighth. Right sleep begets the clear eye, the clear brain, and the steady hand.

Ninth. Too much sleep and too little sleep are both harmful.

Tenth. To cultivate the art of sound and refreshing sleep, observe the four basic rules: (1) think, remember, and imagine constructively; (2) cultivate the constructive feelings; (3) follow the laws of health; (4) cultivate volition, the power to decide and act.

Eleventh. Practice the thirteen specific rules for right sleeping.

Twelfth. Obedience to Nature's seven laws for the correct nourishment and correct use of the body will bring health and the power to endure.

Thirteenth. Each of these laws rests upon health.

Fourteenth. The cause is right thinking.

Fifteenth. This leads to right breathing, drinking, eating, cleansing, exercising, and resting; the result is health.

Sixteenth. Health is the mother of endurance.

Seventeenth. Endurance—the power of sustained effort—is an essential for quantity of work, a necessary ingredient in quality of work, and a requisite constituent in correct mode of conduct.

Eighteenth. Endurance is thus seen to be vitally related to the principle of Service—the source of progressively profitable patronage.

TEST QUESTIONS

1. What is the meaning of the term Endurance as used in the Area Science, and upon what do mental and physical endurance depend?
2. State the principle from which all other laws of physical growth are derived.
3. What constitutes correct breathing, and why are correct habits of breathing essential to good health?
4. Why is breathing through the mouth a destructive habit, and how may it be corrected?
5. (a) Give the law of mentation. 21
(b) Give the law of correct breathing. 26
(c) Give the law of correct drinking. 33
(d) Give the law of correct eating. 40
(e) Give the law of right cleansing. 46
(f) Give the law of right exercise. 51
(g) Give the law of rest. 56
6. What is the meaning and value of temperance?-- 61
7. State the five beneficial results of proper exercise. 65
8. Why are relaxation and sleep essential to health? 70
9. What effect has thought on bodily condition? 74
10. Why is endurance so intimately related to the principle of Service? 79

